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THE
CINCINNATI
MEDICAL NEWS.

EDITED BY

J. A. THACKER, A. M., M. D.

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THE CINCINNATI MEDICAL NEWS.

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ORIGINAL CONTRIBUTIONS.

On Cysticercus Cellulosæ.

BY C. S. TURNBULL, M. D., OF PHILADELPHIA.

THROUGH the courtesy of our friend Dr. J. E. Garretson, we are enabled to present the notes of an interesting case of cysticercus within the human eye, concerning which rare lesion a few remarks we trust will be pertinent.

"History of case. Patient, J. J. Andrews, of Philadelphia, aged fifty-five. Temperament, sanguine; health, vigorous; occupation, merchant. When a boy, the patient was struck upon the eye (in which was found the hydatid) by a basket in the hands of a playmate. As an immediate result of this accident great inflammation ensued in the injured organ, which, after a lengthy resistance to the means of cure employed; finally yielded, becoming as comfortable as before the blow. In early manhood the lens of this eye began to grow cataractous, the opacity progressing rapidly to complete monocular blindness.

Twenty years now passed, the patient finding satisfaction in an increased sight residing in the well eye. To use his own expression, 'this well eye had taken on itself the office of the sick one.'

Five years and a half ago another change occurred. Without explainable cause the cataractous eye became the seat of paroxysmal pains, recurring with a frequency and regularity suggestive of malarial influence. A peculiarity of diagnostic signification in connection with these pains lay in a gradually increasing intensity characterizing them. The cause, whatever it might prove to be, was

evidently of a growing nature, and as a culmination of this intense pain the patient became conscious of blows struck on the inside of the eye, the sensation being described as 'hammer strokes.'

A marked feature associated with the painful paroxysms was vascular engorgement. In ten minutes from the striking of a blow the conjunctiva would congest to a condition of chemosis. Lachrymation was unusually profuse. The paroxysms (and the pain was described as excruciating) were about bi-weekly. The palpebral conjunctiva was somewhat granular.

Search after a Diagnosis.—The granulated lids, a bad tooth, and the periodicity characterizing the attacks were features attracting attention. As negatives, there was absence of all external glaucomatous expression. No history of specific or other peculiar disease. No neuralgic tendencies.

Treatment was commenced with reference to the derangements seen to exist. The granulated lids were given attention after the usual manner, a zinc and alum solution being combined. The affected tooth was extracted, while its alveolus, which was found carious, was scraped by means of a burr revolved by the surgical engine. Quinine was administered in consideration of the periodicity.

The treatment adopted meeting with no satisfactory result, thus exhibiting fallacy in inference, the search after cause was renewed. In pursuit of this search attempt was made by means of atropia to produce such dilatation of the pupil as should expose the whole circumference of the crystalline lens; this dilatation was found exceedingly difficult to secure, the iris being almost entirely wanting in response.

For three days a strong solution of atropia was used; on the third the iris had fully dilated. The patient, thus presenting, was subjected to an ophthalmoscopic examination; the illumination revealing the fundus of a sac existing in the posterior chamber. The cyst, or whatever it might prove to be, was evidently united to the ciliary margin. The sight obtained at this view was too indistinct to suggest thought of a cysticercus. The atropia being continued, a succeeding visit, made on the following day, revealed the secret of the diagnosis.

A balloon-shaped body was now plainly to be seen, in

the act, evidently, of detaching itself from a part to which it had been adherent. The next day the detachment was complete, the parasite floating free in the aqueous humor.

To illustrate the movement of the animal, reference may be made to a balloon. A cysticercus is in form a miniature balloon; the head of the parasite, which is the dependent part, bears close likeness, when extended, to the basket.

To imagine a floating and swaying balloon suddenly drawing into its interior, and as suddenly throwing out its basket, is to secure the fullest notion of the action of the hydatid.

For a whole week the act of floating was continued in the posterior chamber. At one time the animal would be in full view; at another he would have retired within his sac, and be lost to view behind the iris. At no time did the parasite come through the pupil into the anterior chamber.

On the ninth day of observation, the head of the cysticercus was found fixed to the center of the capsule of the crystalline lens, into which it seemed to be trying to force a way. This attachment continued unchanged until the hour of operation, three days later.

A diagnosis established, removal of the parasite was effected by the performance of Graefe's method for extraction of the lens.

The parasite lived for some time, after being placed in a warm saline solution. Microscopically the animal presented its characteristic appearances, and subsequently, microscopically, the suckers and hooklets were plainly discernible."

The description quoted has been copied verbatim from Dr. Garretson's account, because of its peculiar clinical value, describing as it does most vividly "the search after a diagnosis," and as giving also the "fullest notion of the actions of the hydatid."

As the subject under consideration is one of unusual interest, we have thought it best to include a brief and concise account of the method of development of the cysticercus cellulosæ or larval tapeworm from the eggs of the tænia solium or parent tapeworm. Its novel course of life and travel, *i. e.*, from one individual to another, and unique method of propagation must be thoroughly

understood before the significance of this peculiar lesion can be appreciated.

The entozoon under consideration is the larval form of what is known as the *tænia solium* or tapeworm.

It was known in the very earliest times, and was described by Plater* in 1602. Goze† first recognized its animal nature in 1784, Werner‡ found it in man in 1786, and Kuchenmeister was the first who showed it to be the larval condition of the *tænia solium*.

The *cysticercus cellulosæ* is, as its name implies, a bag-tailed entozoon of the cellular tissue. It has its origin in the inter-muscular connective tissue of the "measly pig," the uncooked meat of which contains the embryos. People become measly, then, not directly from eating "measly pork," as we even now sometimes read, but by the circuitous mode of the tapeworm developing in the intestine.

The person infected may derive the mature eggs of the *tænia solium* from his own intestine or from the tapeworm of some other individual. The former—self-infection—may occur in two ways: mature eggs, either free or accompanying the detached and expelled joints of a tapeworm, may be taken into the mouth and swallowed, or mature egg containing segments may, by vomiting, be regurgitated into the stomach. In the second way, by food or through the use of cooking utensils.

The ways and means by which tapeworms are acquired may, in a general way, be deduced from a consideration of their development. The habit, or rather the bad habit, says Ziemssen,|| of using meat imperfectly cooked or quite raw, which is becoming every day more common, is extremely favorable to the propagation of tapeworms or the development of their embryos (*cysticercus cellulosæ*).

Butchers, bakers and cooks who harbor tapeworms are, in consequence of their occupations, especially likely, from lack of cleanliness, to infect the food supplied or prepared by them, and in this way bring about the measly infection. ¶ Every person affected with tapeworm, not

*Ziemssen, vol. vii. p. 686.

†Göze, "Neuste entdeckung, das die Finnen im Schweinefleisch keine drusen krankheit, sondern Blasenwürmer, sind." Halle, 1784.

‡Werner, Verm. intest. brev. expositions cont. II., Lips. 1786.

||Ziemssen, vol. iii.

only carries with him danger, but is constantly threatening the health of his neighbors.

Concerning prophylaxis we would here reiterate the advice Ziemssen* gives upon this important subject. "With regard to swine, the idea that they thrive better amid filth must be looked upon as a prejudice that is no longer entertained by skilled agriculturists. The habit that still prevails in some farm-yards of intentionally giving the animals access to the excrement of human beings, should at once be put a stop to as thoroughly worthy of reprobation, and pigs should be so inclosed as to be unable to wallow about in the dung heap and other filth. Though the ruminants have no such filthy propensities, still they, too, should be shut out from access to human excrement. With this object, the barbarous custom of defecating in every place promiscuously, should be put down with a high hand."

Tænia solium, or tapeworm, is found in the small intestines of man. The head is usually fastened to the mucous membrane of the intestine in its upper third. Up to the present time tapeworm has only been found in man, and seems peculiar to him. It is very frequent in Europe and America. In Europe, the middle of Germany is remarkable for being the land where it is most widely diffused.

The tapeworm must be looked upon as a colony of animals having an alternation of generation. The so-called head is the larva-like nurse; the segments of the worm—the proglottides—are the animals with sexual organs. From the head (scolex), without any mingling of the sexes, are produced these segments by a process of budding. These segments (animals) are hermaphroditic and generate eggs, in which a six-hooked embryo becomes developed. If these segments find entry into the stomach of a suitable animal, their envelopes becomes softened or undone, and the eggs are set free. Once hatched, the embryos are set free, and boring their way through the walls of the stomach, disseminate themselves throughout an animal's body. In the course of its boring, an embryo now and then penetrates the walls of a blood-vessel, and is whisked away to some remote portion of the body; *i. e.*, the head or the extremities. There it continues to grow; and, living a prescribed life, becomes en-

*Ziemssen, vol. iii.

cysted, shrivels, or undergoes calcareous degeneration; or, if superficial, may be discharged by abscess formation. It is no difficult matter, therefore, to understand, and account for, the appearance of a cysticercus (measles) within or about the eye of an infected animal.

Cysticerci have been found, we might say, in all parts of the body. Delore and Bonhomme* found 3,000 in one individual, of which number one was found in the heart, pancreas, and medulla oblongata, four in the cerebellum, seven in the parotid gland, sixteen in the lungs, twenty-two in the meninges, eighty-four in the brain, and myriads in the mesentery and cellular connective tissue. Leuckart† found them in the blood of the portal vein, and the liver is oftenest the seat of these larvæ. They have, also, been found in the domesticated deer and polar bear, dog and rat.

The cysticercus cellulosæ is a thin-walled vesicle with limpid contents, seldom exceeding the size of a pea or bean. This vesicle has an irregularly wavy surface. It is usually surrounded by a capsule of connective tissue, to the inner surface of which it is closely applied. Inside of the cyst, and visible through it, is a firm, round, whitish body, which is connected with the depression in the wall of the cyst. On opening the cyst this body is found to be a pear-shaped sac. Inside this sac is the head of the cysticercus, turned inside out like the finger of a glove. The head resembles, in every way, the head of the *tænia solium* (tapeworm).

Since Von Graefe and Liebreich made the first exact observations upon this subject the number of cases has greatly increased. The first case of this rare lesion was one in which a cysticercus cellulosæ (lebender Finnenwurm) was discovered in 1829 by Sommering,‡ in the anterior chamber of the eye, of a healthy girl eighteen years of age. The parasite floated free in the anterior chamber, now and then took hold of the iris, and by its motions caused intense pain. It was removed alive by Dr. Schott, through a corneal incision, and subsequently lived in warm water for half an hour. It has also been found by Logan in anterior chamber, Mackenzie, 1832; under the conjunctiva by Baum, 1838; under the epithe-

*Archiv. Gén. 1865, i. p. 355.

†Menschlichen Parasiten, i. p. 129.

‡Ammon's Zeitschrift für die Ophthalmol.

lium of the cornea by Cunier, 1841; under the skin of the eyelid by Sichel, 1847; twice in anterior chamber, under the skin of the eyelid, and under the ocular conjunctiva, Mackenzie, 1848; ophthalmoscopically, in the posterior half of the eye, Von Graefe, 1853;* in the orbit, Von Graefe, 1863; in the lens, Von Graefe, 1854.

The late Albrecht Von Graefe,† in a practice of thirteen years, saw about 80,000 eye patients, out of which there were eighty-one cases of cysticercus, within or about the eye; that is, about one in a thousand cases. Out of this number it occurred three times in the anterior chamber, five times under the conjunctiva, once in the lens, and once in the orbit, whilst the greatest number were found situated in the posterior portion of the eyeball, *i. e.*, retinal or sub-retinal, and generally escaping into the vitreous. Virchow, up to 1866, had seen it in the brain in two per cent. of all the post-mortems made in Berlin. The youngest individual affected was eight years of age. Ninety per cent. were between fifteen and fifty-five years, and it occurred only once under the retina in a man aged seventy. Two-thirds of the cases occurred in males. Only five or six of the patients previously had tapeworm, while very frequently other inmates of the house were giving lodgment to them. (This observation is of more than usual significance, as it goes to show the thoroughness with which Von Graefe prosecuted all his researches). In South Germany, Switzerland and France, cysticerci are rare. Among 61,000 eye patients whom Graefe‡ in Halle saw up to 1878, he had seen but two cases of cysticerci, and these were in the anterior chamber; one was in the eye of a child four years of age (this fact is worthy of note, as the youngest subject mentioned by Von Graefe was eight years of age). In other parts of the eye he had seen it four or five times annually. Intra-ocular cysticercus occurs at Lisbon (Fouseca, Jr.) only in the proportion of one in two thousand eye patients. The reason of cysticercus being so rarely found in the *anterior* portion of the eye, is because of the smallness of the arteries in that locality.

Leibreich§ extracted a cysticercus by means of a

*Archiv. für Oph., Bd. i. Abth. i. p. 457.

†Archiv. für Oph., Bd. xii. Abth. ii. p. 174.

‡Archiv für Ophthalmologie, Bd. xxiv. Abth. i. p. 209.

§Graefe's Archiv. für Ophthalmologie, Bd. ii. Abth. i. p. 256.

cannula forceps through a scleral incision, aided by an ophthalmoscope attached to his head, so that he was able to illuminate and observe both parasite and instrument. He mentions that the base of the neck of the parasite, which is less transparent than the rest of its structure, and is dotted with fine white calcareous particles, is the part that is most resistant, and that affords the most secure hold for the forceps. Hirschler* reports a case which is identical with that of Dr. Garretson, and many more interesting cases of intra-ocular cysticerci are reported throughout Graefe's Archives.

The methods of operation for the removal of intra-ocular cysticerci are numerous and varied, and inasmuch as the several conditions in each case suggest the adoption of a particular plan of removal, it will be unnecessary to consider or discuss them in this connection.

Von Graefe decided that in the majority of cases of cysticercus, in the posterior half of the eye, phthisis of the globe was the usual sequence, although he† successfully removed a living cysticercus from the vitreous, through a corneal section as early as 1858.‡ Lawson§ mentions, without giving particulars, a similar case recorded by Mr. J. Pridgin Peale. Dr. D. S. Reynolds,¶ of Louisville, published in June, 1874, "A case of cysticercus in the pupillary edge of the iris," of which he says "there was great pain and tenderness of the eyeball with a low degree of iritis. The pupil opened well under the influence of atropia, except at the inferior and external portion, where there was a white, opaque, pear-shaped tumor, the small end of which rested upon, and was adherent to, the capsule of the lens. A portion of the iris containing the cyst was removed. The cyst itself was so firmly adherent to the lens capsule that it was necessary to seize it with a pair of forceps, and by careful traction, made in the same plane with the lens surface, to detach and remove it; and was successful in so doing, without

*Archiv. für Oph., Bd. iv. Abth. ii. p. 14.

†Archiv. für Oph., Bd. iv.

‡Dr. T. G. Morgan, at a meeting of the Phila. Ophth. Society in 1870, exhibited a case of (dead) intra-ocular cysticercus, in a patient in whom both the late Dr. Gescheidt, of New York, and himself had previously seen the entozoon alive and in motion.

§Diseases and Injuries of the Eye, London, 1874.

¶American Practitioner, June, 1874.

rupturing the capsule of the crystalline. The cyst when placed under microscope showed three suckers and a beautiful circlet of hooklets." Vision rapidly improved.

Dr. Chas. J. Kipp, of Newark, New Jersey, presented at the International Ophthalmological Congress, in 1876, a case of cysticercus extracted from the ocular conjunctiva.

"At a meeting of the Atlanta Academy of Medicine, in March, 1878, a case of intra-ocular cysticercus was reported by Dr. Calhoun. In this case, on account of the patient's unwillingness and the general bad results of the operation, no interference with the entozoon had been attempted."*

For those who wish to investigate the subject of human and comparative helminthology, we would cordially recommend Dr. Cobbold's new "Treatise on the Entozoa. etc." The part of the book which treats of tapeworms will be found especially useful to students of sanitary science. To Dr. Cobbold we owe the knowledge which puts thus tersely the fact, that "all kinds of tapeworm larvæ, measles, bladder worms, etc., *have a natural life epoch assigned to them.*"†

He, however, reminds us, while speaking of *tænia solium*, of the danger of handling fresh tapeworms, as we might get their eggs under our nails or on our clothes, and so swallow them. We are also reminded of the danger of eating salads which may have been manured with nightsoil containing, it may be, myriads of tapeworms' eggs.

For an account of the experiments of Pelizzari, Tommasi, Perroncito and Giacomini, we must refer to the book itself; it will suffice to say that they in no way contravene the experiments of Lewis, who proved that a temperature of 140° Fahrenheit was sufficient to destroy the vitality of cysticerci of all kinds.

*Medical and Surgical Reporter, Philadelphia, June, 1879.

†"A Treatise on the Entozoa of Man and Animals, including some account of the Ectozoa." T. S. Cobbold, M.D., F.R.S., F.L.S., etc., London, 1879.

Clinical Lecture on Melancholia.

By A. E. MACDONALD, M. D., Medical Superintendent of New York City Asylum, Ward's Island.

GENTLEMEN:—The patients whom I present to you to-day illustrate the second of the four forms in our classification of insanity—the form of melancholia. You will readily perceive that there is a very decided difference between them and those whom we saw at our last meeting—at once in their appearance, their attitude, and their conduct. We have now the asthenic as opposed to the sthenic form of insanity, depression taking the place of excitement. There is none of the liveliness which was before apparent in action and speech, and instead there is depression both of mind and body. In the former class the patient was drawn out of himself, was keenly alive to all that was said and done about him; now he is self-absorbed, his thoughts are turned inward, and he is too much concerned in the contemplation of his own griefs and sufferings to pay much attention to his surroundings. If he regards them at all, it is only because he sees in them fresh dangers or new impositions.

We are accustomed to speak of melancholia as of mania, as either acute or chronic, sometimes taking account of the arbitrary division based upon the duration of the disease, but oftener and more properly having regard to the general type of the symptoms presented. Another division, depending upon the manifestations in the individual patient, recognizes the two forms—melancholia with frenzy and melancholia with stupor—in accordance with the approach toward mania on the one hand or dementia on the other. It must be remembered that the clean-cut differences in the forms of insanity which we can draw in our descriptions, or illustrate by the selection of typical patients, do not obtain through all clinical cases; that there is a gradual approach of the different forms toward one another; and that we will often find patients so exactly upon the border-line between mania and melancholia with frenzy on the one side, or between dementia and melancholia with stupor on the other, that it is hard to tell just how to class them.

ESSENTIAL DIFFERENCE BETWEEN MELANCHOLIA AND MANIA.

Whatever the particular form which melancholia may assume, the essential difference between it and mania is, as I have said, the element of depression both physical and mental. We have now pallid face, feeble circulation, and arrested secretions. The approach of melancholia is slower than is that of mania. There is no sudden and unexpected outburst, but the period of alteration is longer and is more likely to be appreciated by the friends of the patient, or even by himself. In fact, it is by no means uncommon for the patient to recognize the approach of his malady, to detect the want of reason in his fancies, and to endeavor to argue and steel himself against them, and perhaps for a time with success.

PROMINENT SYMPTOMS.

Sleeplessness is the first prominent symptom in this as in other forms of insanity; disturbance of the emotions follows, and positive delusions soon assert themselves. The patient is unable to apply himself to his former pursuits; he becomes fretful and ill-natured, his natural affections are blunted and soon transformed into actual suspicion and dislike of his family and friends, and into the firm belief that they are conspiring to do him injury, and this feeling is apt to go on to the production of violence either toward himself, or, in what appears to him, self-defense toward others, unless the plain indications in such a case are followed and he is removed from his customary surroundings and associations.

PHYSICAL CHARACTERISTICS OF MELANCHOLIA.

The first case which I present to you shows plainly, as you see, the physical characteristics of melancholia, and in a very acute form. Indeed, this is but the fifth day of his asylum residence, and his admission followed very closely upon the recognition of his disease. He is much emaciated, feeble in movement and in voice, and his face wears the expression of great mental suffering. He shows you the banner, the carrying of which through the streets and into the churches led to his arrest; and he explains the reason of the inscription upon it. The inscription is, "Freemasons everywhere!—among women and children! All working cautiously! Guard children everywhere!" And the explanation is that ascribing all his own troubles,

real and imaginary, to the body named, he considers it his duty to give this warning to others.

SUPPOSED INFLUENCE OF SECRET SOCIETIES UPON THE INSANE.

It is remarkable how frequently the false ideas of the insane are based upon the supposed influence of secret societies upon them. And it is a practical point worth remembering, for it may lead to the detection of evidences of insanity in examinations where, if the subject is not broached, the patient may not reveal his delusions. There are two or three channels, indeed, in which the delusions of melancholia are apt to run, and in my own examinations I am accustomed to lead the conversation to the subjects of Freemasonry, spiritualism, witchcraft, and electricity, with a pretty fair certainty that in connection with one or other of them the insanity will be revealed, if it exists.

You see that the patient does not seek to argue in support of his belief as to the influence that has affected him; nor does he cite any manifestations by which he has detected the influence. He *knows* that the Freemasons are responsible for his troubles, and that is enough for him.

CHRONIC MELANCHOLIA.

The second patient is an older man than the first, and his disease is of longer duration and more chronic in character. He has an equally troubled expression of countenance; but he is better nourished and is, indeed, in very fair physical health—and by this the chronic condition of his malady and the slight prospect of recovery are indicated; for when a patient improves in bodily condition without a parallel improvement in mind, it is a very discouraging sign.

SUICIDAL ATTEMPT.

This is the danger in melancholia as opposed to mania—of injury to the patient himself rather than to others—of the latter there is comparatively little fear. Patients suffering from melancholia with frenzy, do sometimes make attacks upon others, but the motive differs from that which actuates the maniac. In the one case it is fear, in the other anger.

But the main danger is that of suicide, and the tendency toward it is so general and so pertinacious that it can not

be too carefully guarded against. A peculiarity which it is important to remember is, that there is often not simply a disposition to self-destruction in any possible way that may present itself, but to self-destruction in a definite and particular way. Hence, that a patient takes no advantage of means that are ready at his hand is no proof of his safety, for he may only be waiting to avail himself of some other means upon which he has determined. He may allow razors and pistols to lie in his room unused, and then drown himself at the first opportunity.

Again, the desire to destroy one's self may be created suddenly by the sight of means by which it may be gratified, just as sane men looking down from a steeple or a bridge feel impelled to throw themselves into the street, or the stream below.

Selfishness, if we may call it so, is characteristic of the insane of this class. They take everything that they see, or hear, or read, to themselves. Especially is the latter the case with the Bible, and the denunciatory passages above all. Under their dictation the right hand is cut off, or the right eye plucked out; and so the danger of self-mutilation is added to that of self-destruction.

HYPOCHONDRIACAL ELEMENT.

The melancholiac is almost of necessity a hypochondriac. The converse is not necessarily true also, though the tendency of hypochondriasis is to end in melancholia. But as long as the transition has not been made, the former may be distinguished by his utter hopelessness of cure of his supposed ailments, while the hypochondriac, though he may not acknowledge his hopefulness, shows it plainly enough by the persistency with which he seeks new remedies and new doctors.

PECULIAR DELUSIONS.

You will find several patients who will tell you that living animals inhabit different organs in their bodies. In one case it is a weasel in the abdomen, in another a rat in the skull, and in a third a doctor who moves from one cavity to another and makes himself peculiarly unpleasant in all. In such cases a feeling of discomfort or pain gives rise to the delusion, and after death the discovery of tumor of the brain or cancer of the intestines accounts for the gnawing of the rat or the weasel.—*Medical Record*, November, 1879, p. 481.

SELECTIONS.

Obscure Affections of the Nervous System.

A paper read before the Baltimore Academy of Medicine, December 16, 1879, by A. B. Arnold, M. D., Professor of Clinical Medicine and Diseases of the Nervous System, College of Physicians and Surgeons, Baltimore.

THE somewhat ambitious title of this paper would be misleading, if I did not indicate the limited range of the subject I intend to occupy. It is usual to speak of the obscurity of a disease, where its etiology and morbid anatomy remain undetermined or conjectural, and it is, therefore, only distinguished by its clinical features. There are, however, certain obscure nervous affections, which very frequently come under the notice of the general practitioner and urgently require his medical interference, but which are exceedingly puzzling because they even want that degree of uniformity in their symptomatology which is indispensable for a diagnostic basis. Some of them include, under a common name, various groups of symptoms, which bear no other relation to each other, but that they are often combined, or occur in succession. I especially refer to hysteria, spinal irritation and neurasthenia. These maladies are usually classed among the functional diseases, but on closer examination it becomes apparent that a great number of the morbid phenomena, thus separately grouped, are frequently associated with the symptomatology of otherwise well-known pathological conditions.

There are perhaps no other expressions in medical use more vague and unprecise than the words, nervousness, nervous temperament, nervous diathesis, nervous constitution, etc., etc., and for all that, these terms attempt to signalize a morbid condition, as actually existing, as it is difficult to define. In a general way it may be said that certain persons manifest a congenital, a hereditary, or an acquired excitability of parts, or of the whole, of the nervous system, which re-acts in an exaggerated or perverse manner. Or, in order to appear more exact, we may venture on the hypothesis, according to our present state of knowledge, that certain parts of the nervous structure may be in a state of unstable equilibrium, which

under known or unknown influences develop symptoms of a character, which we clinically recognize as the expression of a nervous diathesis. It is well known that French authors assign considerable importance to this "nervousness," as an etiological factor in many neuro-pathic affections. When Sydenham says, that all women are hysterical, he probably means to indicate that the nervous system of the female is marked by a vulnerability, which readily oversteps the limits of health, from the effects of comparatively slight impressions. Others insist upon the necessity of distinguishing between the nervous and the hysterical disposition; because, a person may be nervous without being hysterical, while the converse is not true. I am inclined to believe that this distinction serves no other purpose, than to characterize by the term *hysteria*, those remarkable functional disturbances of the nervous system, for which medical men have not yet adopted another nomenclature. This coyness in substituting a more rational name for the malady in question, obliges all systematic writers on nervous diseases to remind their readers that *hysteria* occurs also in the male sex.

However little embarrassment the diagnosis of all ordinary cases of *hysteria* may cause the experienced physician, this protean malady assumes appearances which will tax all his diagnostic acumen. The case, which I shall briefly relate, acquires additional interest from the circumstance that the patient was a boy about fourteen years of age, who, previous to the date of his first attack, had enjoyed excellent health. The symptoms, which at once attracted attention, were the labored breathing (the respiration being entirely abdominal), and the tumultuous action of the heart. He complained of no pain, but the face was expressive of dread and anxiety. Physical examination discovered nothing abnormal in the thoracic organs. The paroxysm of *orthopnœa* (for as such it appeared to me) lasted several hours, and after its termination the patient felt somewhat exhausted, but on the following day, after a sound sleep, he was perfectly restored and attended as usual to his occupation, which was that of an errand boy. I have had since then frequent occasion to see him during similar attacks which came on without any assignable cause, and, as there were no other evidences of disease, I began to suspect the existence of an

obscure nervous affection, though if the patient had been a girl, I would at once have diagnosed hysterical asthma. The case cleared up by and by, on the occurrence of other symptoms, which accompanied the asthmatic attacks. These consisted of strange contortions of the body and a condition resembling trance, the paroxysm ending with a violent fit of sobbing. It was this regular finale of the attacks, which revealed the hysterical element. I must not forget to mention that my patient stoutly denied the practice of masturbation.

The next case is a remarkable instance of hysteria, in a man sixty-two years of age, for whom I had opened a large abscess in the axilla, which was followed by facial erysipelas. The stage of desquamation was marked by muscular weakness, somnolence and occasional wandering. Complete convalescence was interrupted by frequent paroxysms of stridulous breathing and suffocative cough unattended by expectoration. Sometimes a state of semi-unconsciousness supervened, during which the patient performed the most grotesque antics with hands and arms, the fingers being widely separated and very rigid. Most of these attacks ended with an explosion of crying or rather blubbering. It may seem rather odd to speak of hysteria in a sexagenarian, but the patient was not one of those old paralytics, who are inclined to be emotional and lachrymose; and besides, no one would have hesitated a moment to pronounce such symptoms hysterical, if they had been witnessed in a woman. The well-known fact that mental disturbances are not uncommon after attacks of facial erysipelas, hardly amounts to serious objection against this opinion, for the diagnosis of hysteria mainly rests upon the peculiarities of the onset, the association, the course and termination of the symptoms. The following case deserves to be numbered among the curiosities of hysteria: A healthy-looking woman twenty-eight years old, the mother of two children, had suffered for a long time from headache, which corresponded to the description usually given of "*clavus hystericus*." She complained, also, of a number of other symptoms, which left no doubt as to the nature of her malady. About four months after the date of my first visit, a new and very strange symptom made its appearance. During the first few days of her menstrual period, she has considerable hemorrhage from the nipple of her left mamma, which

is accompanied by a burning sensation in this organ. I saw the blood trickling down from the nipple in large drops, and the closest examination could not detect the slightest abrasion. She is not nursing a child, her youngest being four years of age. Dr. Wilks, in his book on nervous diseases, relates a nearly similar case. He calls it *hydrosis cruenta*. In Hebra's work on skin diseases, several cases of this kind are also recorded.

It was certainly a triumph of clinical medicine, when symptoms were referred to the influence of a particular diathesis, that embraced psychical, sensory, motor, reflex, vaso-motor and trophic disturbance of a central or peripheral origin, sometimes occurring singly or in complicated groups, simulating frequently the symptomatology of nervous lesions in every part of the body, coming on abruptly, and disappearing as suddenly, or showing a remarkable obstinacy. A great amount of accumulated experience was evidently necessary before the multiplicity and variableness of hysterical symptoms would allow the suggestion of a morbid condition common to them all. The tendency of the hysterical element to involve different parts of the whole cerebro-spinal axis, so that in observing a large number of individual cases, every form of functional disturbance may come under notice, is a unique pathological condition and invests hysterical symptoms with a paradoxical character.

To ascertain the conditions and circumstances which favor or accompany the occurrence of obscure affections, for the purpose of obtaining a guide for our therapeutics, is undoubtedly of great practical importance, and this is particularly true of hysteria. Disturbances of the generative organs in the female have always been considered the most common exciting causes of this malady, but it is perhaps more than questionable whether hysteria is ever thus caused in cases where no constitutional predisposition exists for its development.

This brings me to speak of another obscure affection, which formerly had given rise to a most fanciful opinion concerning its agency in the production of a vast number of diseases, and which, after having been abandoned for some time, again finds favor with some eminent observers. Of course, I allude to spinal irritation. The connection between this symptom and hysteria is undeniable; and because a few cups or a small blister over

sensitive spinous processes are occasionally serviceable in relieving the effects of a so-called spinal irritation, this only shows, what is no secret, that hysterical females are not infrequently benefited by very insignificant remedies. Hyperæsthesia, in the region of the spine, may be no less an hysterical symptom than arthritic pains and sensitiveness of the abdominal walls, when other morbid phenomena are wanting that point to actual disease of the joints or of the peritoneum.

Although in practical medicine it is justifiable to refer a large number of ill-defined disorders in women to hysteria, it offers on the other hand great temptation to facilitate diagnosis by a too hasty judgment. There is reason to hope that, with the advance of neurological studies, many of the so-called hysterical affections will find their proper place in a more exact pathology. A step in the right direction was happily taken by Dr. Beard, of New York, who has drawn attention to the widely prevalent morbid condition characterized by nerve exhaustion, and for which he chose the term neurasthenia. It can be easily understood, to what extensive and complicated forms of disorders such a pathological state of the centers of innervation must necessarily lead. Professor Erb, in Ziemssen's Encyclopædia, acknowledges the value of Dr. Beard's contributions to neuro-pathology by devoting a chapter to its consideration. According to the large experience of Dr. Beard, cases of neurasthenia are quite as common in the male as in the female sex. I have no doubt that the following case which lately came under my notice should properly be classed among neurasthenic affections:

H. T. is a barber, twenty-three years of age. He attends closely to his business, is confined to his shop from morning until late at night, and consequently but seldom enjoys the fresh open air. Had been ill for the past two months. His general appearance was good, and there were no evidences of any serious disease. He principally complained of a fluttering at his heart, a choking sensation in his throat, and faintness. But the symptom, which gave especial alarm to his family, was his dread of being left alone in a room. And strange enough, when he happened to go into the street and meet a collection of people, he became terrified and hastened home. The patient's trouble was entirely removed, after having been sent to

the country with the instructions to live on "the fat of the land," and go early to bed.

There is one circumstance, in connection with obscure nervous affections in women, which I think has not received the attention it deserves. The malingering of hysterical females is notorious, but there is no reason why women should not be the victims of hypochondriasis as well as men. Judging from my own personal experience, I must confess, that I have observed many cases of interminable though ever changing complaints of bodily ailments that I would have stamped as hypochondriasis, if the patients had been of the male sex. Why this disorder should be the unenviable prerogative of men is not easily understood. I venture to say, that the following brief notes of a case would satisfactorily fit the description of a genuine hypochondriac:

Mrs. H., fifty-four years old, in comfortable circumstances. She related to me in a whining tone that she has suffered for the last ten years from a number of ailments, that render her life miserable. From the lengthy catalogue of her complaints I will only mention sick-headache, dyspepsia, liver-disease, womb-trouble, gravel, internal piles, inflammation of the bowels, kidney disease, night-sweats and rheumatism. She is extremely cautious in her diet, wears thick flannel during the summer, a liver-pad, a pessary, and a Pulvermacher's chain. She has taken any amount of medicines. In spite of all these diseases, the remedies and the appliances, she is the very picture of health. She was extremely pleased when I wrote her a prescription filling a whole page of fools-cap.

The limits of this paper prevents my pointing to other morbid influences, which bring in their training a host of nervous symptoms that tend to darken diagnosis. I would merely enumerate some of the best known, such as chronic alcoholism, abuse of tobacco, coffee and tea, sexual excesses, the forced abstemiousness of spinsters and young widows, anæmia of the brain and spinal cord, and the wear and tear of body and mind in the hot race for wealth and distinction.

Keeping in view these circumstances, and many more that must readily occur to the physician, under which obscure nervous affections make their appearance, much valuable aid to diagnosis will be afforded. It happens in cases of this kind, as in all obscure diseases, that an ac-

quaintance with the previous clinical history, and not so much the nature of the symptoms, not only assists in the recognition of the special malady, but also presents the proper indications for treatment. This is especially the case with hysteria. A hasty glance at the principal disorders that may owe their development to the hysterical diathesis is sufficient to show, how much the practitioner must be on his guard in order to escape diagnostic blunders. Mental disturbances of hysterical nature, not only present the well-known features of perverseness or weakness of the will, emotional excitement or depression, but the language and the conduct of the patient may display a degree of moral depravity or exaltation of sentiment and behavior, which closely trench upon, or actually pass into, confirmed insanity. The functions of special and common sensation are frequently disturbed in various ways. Smell, sight and taste may be transitorily affected; trance, aphonia, laryngeal spasm, hyperæsthesia, anæsthesia or paræsthesia may be present, while neuralgia in different parts of the body are vere common. In the motor sphere of nerve action extensive or limited forms of convulsive seizures, paralysis, cramps and rigidity of limbs and joints occur. Gastric, intestinal, uterine, ovarian and vesical derangements complete the host of maladies that may all have hysteria for a pathological basis. And as if the occurrence of these multifarious symptoms were not enough to embarrass diagnosis, it must be borne in mind that similar ailments variously combined, not uncommonly precede the onset of acute diseases, and appear during the course of chronic affections. Formerly it was the fashion, and to some extent it is now, to neglect or to think lightly of the suffering of hysterical females, for the reason of the favorable prognosis as regards danger to life. The little consideration which these patients received from the physician, as well as from their friends, was in some measure due to the imposition sometimes practiced by hysterical females, which has not inaptly been called "vulgar hysteria." At the present day, more concern is felt by medical attendants for persons who are the victims of hysteria in any of its forms. We possess now in electricity, the bromides and chloral, therapeutical means, which exercise considerable control over many hysterical affections. There is indeed one remedy which, were it not for the great risk of inducing

a deplorable habit, would highly recommend itself in the treatment of this malady. According to my personal experience there is no other remedial agent that acts so promptly in giving relief to a multitude of hysterical symptoms, as alcoholic stimulants. It is my conviction, that many a sad case of intemperance in women originates in the power which alcohol exerts in soothing the distressing sensations inseparable from nervousness and hysteria. In praise of the traditional anti-hysterical drugs, such as assafœtida and valerian, it must at least be said, that they do no harm.—*Maryland Medical Journal*.

The Treatment of Typhoid Fever in the Philadelphia Hospitals.

THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

THE remedies which have been found at the University Hospital to exert the most powerful influence upon the follicular intestinal catarrh, always present in this disease, are first and foremost the nitrate of silver, and next the subnitrate of bismuth and carbolic acid. There would seem to be abundant evidence that nitrate of silver reduces the size of the enlarged follicles, relieves the inflammatory engorgement, and allays the hyperæsthesia of the nerves. It has also been settled by numerous experiments that the nitrate of silver is the most easily administered of the three astringents above mentioned, and the best tolerated by the system. If there is any putrid element in the disease, carbolic acid is employed instead of the nitrate of silver. The nitrate of silver is administered in doses of one-fourth of a grain four times a day. This treatment is persevered in until the ulcers have entirely healed.

If the discharge from the bowels is composed of small, semi-solid stools, it is, with propriety, disregarded; but if the stools are watery and large, opium is administered in pill-form, combined with the nitrate of silver. From one-quarter to one grain of the powdered opium is given three times a day. If there is constipation instead of diarrhea, belladonna is given conjointly with the nitrate of silver.

Great care is had with regard to the diet when the

catarrhal inflammation of the intestines is present. The food employed is, of course, as digestible as possible. Milk has been found to be the best diet in this disease. If the curd appears in the stools, the milk is diluted with water, or lime-water. Of this mixture of milk and lime-water three ounces are given every two hours, or a little over two pints in the course of the twenty-four hours. When the bowels are torpid, beef or mutton broth is given alternately with the milk.

The beef-tea employed is prepared after the following recipe: Take a quantity of tender meat, and, after cutting off the fat, chop it up fine, put it in a bowl, pour a pint of water over it, and let it stand over night. The water should be kept just on a simmer—the temperature never being allowed to go above 140° , otherwise all the albumen is coagulated, and so either left on the sieve in straining, or introduced into the stomach in the form of curds. After this simmering solution has been allowed to stand over night, pour it into a pipkin, and heat it again gently with enough salt to give it flavor, and, if necessary, add a drop or two of muriatic acid. Then pour it out over a hair-sieve into a jar. The resulting solution will be found to contain all the nutriment possible, and to be the most valuable kind of stimulant and laxative.

When the fever is high, the patient is given all the food he can take. Care is had, however, that, in allowing food, the already inflamed intestinal tract is not further irritated.

The poison in the blood is controlled by means of quinia, and nitro-muriatic or salicylic acid. As a general thing, salicylic acid is only employed where there is some putrid discharge joined with high fever. Quinia is considered (1) to neutralize the effects of the septic poison in the blood, (2) to act as a good tonic to the muscular and nervous systems, (3) to tend to check febrile action, and (4) to remove any malarial element that happens to be present. Quinia is never given in the enormous doses advised by the German physicians. It has been found that such doses will break down high fever, but they produce entirely unnecessary irritation of the gastric mucous membrane. About twelve grains of quinia are given in the course of the twenty-four hours.

The temperature is kept down by preventive measures rather than by the cold bath, which is regarded as a last

resort. It is unnecessary after this to say that the practice of the University Hospital is wholly opposed to the indiscriminate cold bathing in typhoid fever, so much in vogue in Germany within a year past.

When the temperature runs up in spite of drugs, in the milder cases, spongings of the whole body are practised every two hours, the sponges being squeezed out of a mixture of water and bay-rum at a temperature of from 60° to 80° . If this does not succeed (it rarely fails); and if the patient's temperature mounts up to 104° or 105° , he is then wrapped up in sheets wrung out of cold water. If the temperature still runs up to such an extent that life is threatened, the patient is placed in a cool bath until the bodily temperature is sufficiently reduced.

Before the local lesions appear, the fever can be more boldly attacked; but when, in subsequent stages, it runs high, it is regarded as partaking of the nature of a sympathetic fever, largely dependent upon the amount of intestinal lesion, and the use of baths at this period is thought to be attended with great risk. If the cold bath is used at all (except as a last resort, and when temperature can not be reduced in any other way), it is employed during the first ten days in cases where the temperature rises above 103° and can not be controlled by frequent spongings, large doses of quinia, diaphoretics, etc.

With regard to the use of stimulants, the hospital practice is not in favor of administering them simply because a patient has the fever. It is believed that stimulants are only demanded for the relief of certain symptoms. As a general thing, they are not given to children before the age of puberty. They are only administered to old persons, and to meet certain indications, namely, (1) ataxic nervous disturbances, such as sleeplessness, twitchings of the muscles, maniacal delirium; (2) circulatory disturbances, such as feeble and rapid pulse, and feeble development of the first sound of the heart; (3) profound asthenia, as shown by great tremulousness, inability to make any movement, and tendency to slide down off the pillow; (4) dry and brown tongue, with sores on lips, teeth and tongue.

The milder forms of stimulus are always used at first. The one most frequently employed is wine-whey. This is made in the proportion of one part of sherry to three of milk, and as much as a gill or half a pint of it is given

in the course of three hours. If the symptoms increase, stronger stimulants are used, such as whisky. Whisky is usually given in lime-water and milk; the lime-water prevents the coagulation of the milk by the alcohol. These ingredients are mixed in the proportion of one table-spoonful each of whisky and lime-water to every three ounces of milk. In this form half an ounce of whisky is given every hour. If the stimulation is doing good, a diminution of the serious symptoms is noted. If the symptoms increase, on the other hand, the amount of stimulus is reduced.

With regard to complications: relapses are always regarded as true second attacks of the disease, and are treated accordingly. The treatment is resumed, the diet restricted, and the same general watchfulness had over the state of the case as during the course of the first attack.

Hemorrhage occurring early in the attack is considered as of little consequence, but when it supervenes later—when the sloughs are thrown off—it is regarded as a very serious matter. The treatment of hemorrhage is by absolute rest in bed for twenty-four hours, and by the administration of opium, to produce complete quiet for the alimentary canal. The opium is given by the rectum, one grain of the solid opium being prescribed every two or three hours until the patient is gently under its influence; of astringents, for local action, acetate of lead is preferred. A suppository containing one grain of opium and three grains of the acetate of lead is given three or four times daily. Ergot, by reason of its action upon the walls of the arterioles, is also very highly prized. It is given hypodermically near the supposed seat of the hemorrhage. The food allowed is very small in quantity, and absolutely liquid.

Peritonitis is treated by antiphlogistics, sedatives, perfect rest in bed, and a diet which leaves no residuum to irritate the bowels.

True perforation is regarded as beyond the reach of medical skill to mend.

THE GERMAN HOSPITAL.

The quinine treatment (heroic doses) has been given a fair trial in the wards, and has been found to do but very little, if any, good. It has not even been satisfactorily

demonstrated that it reduces the temperature, as the same changes in temperature have taken place in the case of those who have been taking the mineral acids alone. Indeed, after giving quinia some time in some cases it was stopped, and the same changes were found to exist. Quinia has seemed rather to increase the diarrhoea and headache, and in two cases it produced entire deafness for two weeks. Sponging with vinegar and water has been found to act beneficially. Plenty of ice is given the patient to suck, and the ice-cap is applied to the head. The wet pack has been found to lower the temperature for the time being, but in an hour or more it generally mounts up again. To this is added the consideration that it has the disadvantage of necessitating the constant moving of the patient, wearing and weakening the constitution, thereby destroying his or her main support against the disease.

Oil of turpentine, as recommended formerly by Dr. George B. Wood, has been proven to act most beneficially. Especially has it been found useful in those cases where the dry, dark, and heavily coated tongue exists, with abdominal symptoms. It is given in twenty-drop doses in mucilage, every hour or two, and is continued in smaller doses during convalescence. In a large number of cases in which dry, dark tongue existed with tympanites, turpentine acted most beneficially, the tongue regaining its normal color and becoming moist in from six to eight days, and the tympanites disappearing in a much shorter time.

The mineral acids are of great service in keeping the stomach in good order, stimulating the appetite and relieving the intense thirst. In many cases the patients call for their dose of the acid hours before the time, so much are they pleased with its taste and effects. The acid commonly used is the dilute nitro-muriatic acid.

Whenever active, wild delirium exists, from one-third to one-half of a grain of morphia is given hypodermically. This medication has been found to act promptly in almost every instance. In one case particularly, the patient toward evening showing signs of approaching delirium, a large dose of morphia was immediately given hypodermically, which had the effect of rendering the patient perfectly rational when he awoke. Upon another occasion, when this same patient again showed signs of ap-

proaching delirium, the morphia was omitted, upon which a wild attack of delirium came on, which was at once broken up by the use of a moderate dose of morphia hypodermically.

THE EPISCOPAL HOSPITAL.

The temperature is reduced and the heart strengthened by fifteen-drop doses of the tincture of digitalis and two grains of quinia, every three hours. Stimulants are only employed in the severer cases. Excessive diarrhea is controlled by injections containing fifteen drops of laudanum and half a fluid ounce of starch. Dilute muriatic acid is given in fifteen-drop doses every three hours, and in the second week of the disease five drops of turpentine are administered every three hours. Hemorrhage from the bowels is controlled by the internal use of ergot, and the local application of ice to the abdomen. A number of cases have been treated of late with one-fourth grain doses of the nitrate of silver in the second week of the disease, this dose being repeated every three hours with entirely negative results.

THE PENNSYLVANIA HOSPITAL.

Ten grains of quinia are given daily, and ten drops of muriatic acid every three hours. The patient is sponged all over with cold water, in mornings and evenings. Diarrhea is controlled by opiates and astringents. This is the routine treatment. The diet is very carefully regulated, consisting principally of beef-tea and milk. When the first sound of the heart is altered (weakened) early in the course of the disease, it is regarded as an indication that the patient should immediately be put upon the use of stimulants; or, if he is already taking whisky, that the daily amount should be doubled.—*New York Medical Record*, November, 1879.

Treatment of Enteric Fever.

IN Vol. IX, St. Thomas's Hospital Reports, just issued, we find the following *resume* of the treatment of seventy-one cases of enteric fever, in which the death-rate was 11.1 per cent.

On examining the bed-tickets of the seventy-one patients it is found that in by far the great majority of cases

the treatment adopted has been expectant. As a rule the following course has been adopted. The patient has been bathed (washed) on admission, and then kept perfectly quiet in bed till about the tenth day after the temperature has sunk to normal. For the most part the diet has consisted of milk, beef tea, occasional eggs, with alcoholic stimulants when indicated by the constitutional state. The medicines ordered were either salines, effervescing or otherwise, or the mineral acids. Thus, it may be stated, that in no case has any treatment been adopted which would have for its object the arrest of the fever—in other words, no methods of relief were prescribed as specifics; for, although salicylate of soda and quinia were given in one or two cases, they were used for the control of hyperpyrexia; and in the same category must be placed the graduated bath. The medicines most frequently ordered have been the dilute hydrochloric acid, effervescent citrate of potass, and preparations of ammonia.

* In order to reduce hyperpyrexia, the graduated bath was administered in ten cases. This subject is treated in a separate paper by Dr. Ord, in which he says:

To sum up the general results of observation and reflection, the following propositions may be laid down: that the graduated bath, reduced, during a period of from twenty minutes to thirty minutes, from between 90 and 100 to between 70 and 60° Fahr., is a powerful agent in the reduction of febrile temperatures; that in enteric fever it is most efficient and most safely applied early in the disease; that it is not contra-indicated by intestinal, cerebral, or pulmonary complications, but, on the contrary, distinctly tends to check them; that it is contra-indicated by excessive feebleness or rapidity of the pulse, or by great exhaustion; that it is desirable in many cases of intense fever to use the bath more than once; in fact, to repeat it so long as the fever is unchecked, but not to repeat it at shorter intervals than twelve hours, an apparent revival of the temperature often subsiding after such a period. And I am of opinion that the systematic use of this kind of bath as early as the seventh or eighth day of fever is likely to contribute importantly to the reduction of the mortality from enteric fever in hospitals.

As regards the treatment of diarrhea, no astringent or other remedies were prescribed so long as the purging was not severe; but any case in which there were passed

three or more loose motions per diem was treated with special remedies.

In the treatment of urgent diarrhea sulphuric acid was frequently prescribed, often in conjunction with opium, or opium and its preparations were given by themselves. In children vegetable astringents were used, such as catechu, hematoxylin, etc. When the purging became severe, and a remedy was required which should act in a short space of time, enemata with opium, or morphia suppositories (gr. $\frac{1}{2}$) were used. Occasionally the tincture of assafetida was added to an enema if there was much distention of large intestine. Hemorrhage was mostly treated with ice-bag to the abdomen, and either morphia or opium by some of the physicians, or spirit of turpentine by others. This last remedy, by results, would appear to have been most efficacious. Ergot was given in three cases. The guide to the seat of application of the ice-bag has been the situation of pain and tenderness. The ice-bag was not invariably ordered when hemorrhage was suspected or showed itself, and when it was applied some astringent was also administered.

In perforation or peritonitis opium was mainly trusted to, and was given in large and continued doses. In one case it had a markedly beneficial effect upon hiccough, which was causing great distress. Vomiting, if it became severe, was met by ice, effervescing salines, the subnitrate of bismuth, hydrocyanic acid, and rarely liq. strychnia. In one case the vomiting was arrested by an addition to diet.

Delirium and sleeplessness were treated with chloral in four cases. Opium was the general remedy, and occasionally bromide of potassium was prescribed, either by itself in large doses (gr. xx), or in combination with other drugs. Further, although the prime reason for ordering a graduated bath was the high temperature, the bath was nevertheless a very successful remedy in controlling delirium.

Constipation was combated in the great majority of cases by enemata, either simple ones of gruel, or with castor oil thrown in. The rule has been to give one every second or third day if the bowels were very obstinate, but not so frequently if no discomfort. Laxatives were rarely given, and only toward the end of the fever. They

consisted of castor oil in drachm or two-drachm doses, or of preparations of senna.

Quinia was given in three cases in large doses with a view to the reduction of temperature, but only with slight temporary benefit. To two of the above patients salicylate of soda was given after the quinia had partly failed. Finally, in a fair minority of patients, no medicine was prescribed at all, the only remedy on the bed-ticket being an occasional simple enema.

As regards alcohol, the diet columns show that twenty-six, or over one-third, patients received no alcoholic stimulant whatever, or some only during convalescence. Of the remaining forty patients, thirty-three were ordered stimulants during their first week's residence, and seven only during the second week—in other words, when the fever was most severe. The quantity varied from one glass of wine to eight ounces per diem, and in one case to eight ounces of brandy.

Clinical Reflections on Thirty-three Consecutive Cases of Diphtheria, with Remarks on the Management of the Disease.

BY A. M. FAUNTLEROY, M.D., STAUNTON, VA.

AN outbreak of diphtheria at the Virginia Deaf, Dumb and Blind Institution during the fall of 1878 presented exceptional advantages for the observation and study of the affection. The large number of cases under the same roof, following one another at brief intervals of time, afforded facilities for direct comparison of the pathological phenomena in the disease, rarely, if ever, offered in private practice. As a detailed account of the cases would render this communication unreasonably lengthy, it is proposed to submit, instead, a generalization of the facts, solved from a careful consideration of the cases individually.

As the conclusions drawn in the premises hinge their acceptability upon the diagnostic accuracy attained in each case, we shall not remain content in asserting that we know diphtheria when we see it, but shall submit the evidence to the criticism of the *clinician* by whom any false strokes made in the "shades, shadows and perspect-

ive" of the portraiture, would be detected. The facts in connection with this outbreak of diphtheria have an interesting bearing upon the question of the propagation of the disease.

The first case occurred in the person of a pupil, who, on his return from home, though feeling badly, made no formal complaint, and continued to mingle with the other pupils in the study-hall and dining-room until the fifth day after his arrival, when he took to his bed. Upon examination, the glands of the neck were much swollen; skin dry; pulse-rate, 120, and compressible; temperature, 100°F. The throat presented a dark and foetid membranous exudation; plainly the exudation had been upon the throat for some days.

Within twelve days after the disclosure in this case, eighteen additional cases had been carried to the Infirmary. Before the expiration of a month, the cases aggregated thirty-three in number. Besides the apparently conclusive proof of the importation of the disease, the sanitary condition of the buildings and surroundings discredited any idea of the local origination of the disease. The buildings during the vacation just closed had been cleansed from cellar to garret. The water supply is excellent, and comes from a source amply protected from contamination. The lighting and ventilation of the buildings, and the drainage of the grounds, are admirable. The sewerage is adequately secured against the escape of foul gases into the building. The conclusion is irresistible that the disease was imported, and that its *rapid extension in the household was due to direct communication*.

After the discovery of the first case, which was promptly isolated, the throats of the pupils were examined daily. This precautionary measure gave us an opportunity of observing the earliest indication of the disease, which were manifested by a dusky redness of some portion of the throat, with a swollen state of the mucous surface. This condition was accompanied by a sense of dryness, but no marked pain in the throat. In addition, there were slight intumescence and sensitiveness of the glands situated in the superior anterior carotid triangle on either side of the neck; weariness, or a feeling amounting to prostration; increase of bodily temperature and pulse

in the majority of instances; appetite impaired; tongue coated, but usually moist.

Within a period, varying from a few hours to a day, white, greyish or yellowish patches appeared upon the previously reddened and swollen surface of the throat. In six instances, where the exudation was meager and confined to the tonsils (which clinical experience has shown to be the mildest form), we embraced the opportunity to observe the evolution of the membranous exudation from its first appearance to its exfoliation, undisturbed by any direct application. The exudation increased either by extension circumferentially, or by coalescence of two or more patches; this exudation grew thicker in the central portion, and gradually shaded off in the surroundings, and appeared to be incorporated with the histological elements of the mucous membrane. Shortly, its edges became defined and puckered; the surrounding redness abated, and the exudate appeared raised *en masse* from its base. During this period, the exudate presented acromatic changes from its primary white or greyish hue to a deep yellow, buckskin color. These transformations presaged the exfoliation or detachment of the exudate, which took place on the second or third day after its appearance, either *en masse* or by slow molecular disintegration, leaving its late site somewhat reddened and streaked with muco-purulent matter.

In order to illustrate the constitutional manifestations of the contagium, we shall group its effects, restricting the account to such as came within the purview of the outbreak aforesaid.

Effects upon the Bodily Temperature.—The heat of the body, though generally but slightly elevated beyond the normal standard in the initiatory stage of the disease, rises rapidly (with an increased dryness of the skin and tumefaction of the cervical glands) during what we shall call the maturative stage of the diphtheritic membrane. The temperature never became very high, nor was it long sustained, but generally subsided before or on the fifth day, with the completion of the exudation, and dropped down almost to the normal bodily temperature during the period of the exfoliation. The degree of fever manifested is, by no means, a perfectly reliable index of the gravity of the attack; for, even in the severer forms, the temperature may not become strikingly marked throughout their en-

ture course, but may present an early tendency to declension or fitful and irregular increments, with coolness of the extremities. Though the vacillations of temperature are not always trustworthy experiments of the progress and decline of the exudation, yet it obtained, as a general rule, under our observation, that an increment of bodily heat betokened a forward movement, while a decrement signalized a retreat or halting of the exudation.

Effects upon the circulation.—In the initiatory stage (prior to the appearance of the characteristic deposit in the throat), the pulse is usually but slightly accelerated, yet becomes frequent during the formative stage of the exudation—never displaying, at any time, the characteristics of what we shall call a *sthenic* pulse, but, *ab initio*, inclining to frequency, fullness, compressibility, feebleness and intermittency—the indices of diminished blood pressure and weakened ventricular contraction.

Effects upon the Respiration.—The breathing is not disturbed proportionately with the circulation. We have, however, observed instances of an embarrassment bordering on dyspnoea, when (by the method of exclusion) it could be ascribed only to a relative spoliation or diminution of red corpuscles—the oxygen carriers.

Effects upon the Nervous System.—The sense of “tiredness” and prostration experienced from the earliest stage of the disease, deepening during its progress, and remaining even during the period of convalescence, are distressing tokens of impaired nervous tone. Likewise, the restlessness and wakefulness occurring early in some instances, and drowsiness and lethargy later in others, should be severally attributed to diminished innervation. The ganglionic nervous system early exhibits its morbid entanglement in decided anorexia or loathing of food, with a manifest depreciation of the digestive, assimilative, secretive and excretive actions. The rapid anæmia, which occurs, to a greater or less extent, in every case of the disease, further signalizes the serious damage sustained by the *organic nervous* system, the regulator of the recodite actions of the organism.

Among the neuro-pathological sequences of the contagium of diphtheria, we have to record the following observations: Impairment of ocular accommodation and difficult deglutition; an instance of reflex vomiting which occurred shortly after the exudation (which had been ex-

tensive and foul) became detached; for two weeks the ingesta were invariably returned—sometimes immediately—more frequently within an hour or two; also, two instances wherein occurred such irregular movements of the lower extremities as to simulate locomotor ataxia.

The Period of Incubation—Embracing the interval between the known exposure and the appearance of the characteristic deposit in the throat—ranges (according to our observation) from three to fifteen days.

The Modes of Dying.—The most frequent modes of dying are by adynamia or apnœa (laryngeal obstruction); occasionally by cardiac paralysis, syncope, heart clot, septicæmia and sudden collapse. We have to record but a single death out of the thirty three cases. The death occurred by adynamia in the person of a new, unmanageable pupil, to whom the deaf and dumb alphabet and sign language were alike unknown, thus precluding intelligent communication. These facts are adduced in order that we may record our strong conviction that this mode of death should and may be generally averted by an early, timely and systematic recourse to stimulants, with abundant and nutritious alimentation.

The Nature of the Affection.—Professional opinion has undergone several variations during the last fifty-odd years—starting them with Bretonnean's declaration that it is wholly a local disease; though this view was subsequently so far modified as to include possible blood poisoning by absorption of putrescent matter from the throat.* Upon the heels of Bretonnean followed a host of observers—French, English, American and German—who insisted upon its specific and general nature. This latter view attained general acceptance until, within the last decade, experimental investigators (Oertel, Heuter, Tom-mase, 1868) have essayed to prove that the affection "*begins as a local disease and develops afterward into a general one.*"† The clinical history of diphtheria seems, to our mind, to clearly establish the primary constitutional characters of the disorder. The theory of the localists, led by Oertel, is an attractive one to the histological pathologist—Bacteria finding a lodgment in the throat, originate local trouble, and then start out by way of the

*Mémoires Académie Royale de Médecine, 1821-26-27, Paris.

†Ziemssen's Cyclopedia of the Practice of Medicine, Vol. I—"Diphtheria"—Oertel.

lymphatic channels to depredate upon the living territory near and far—certainly quite considerate and deliberative action on the part of the bacteria when there are more direct modes of entrance into the system. Whether the specific poison of diphtheria be cryptogomic, animalcular or gaseous, matters not for our present purpose. If clinical facts have any special meaning, the evidences of systemic poisoning are *actual prior* to the establishment of “a local habitation” on the part of the contagium. The sense of prostration experienced, and the thermometric evidence of tissue hyper-oxidation anterior to the exudation in the throat, are not without significance. The swelling and tenderness of the lymphatic glands, below the jaw, previous to any deposit in the throat, is also full of meaning. These, together with the interference in the several processes which lead up to sanguinification, are evidences of systemic occupation by some invading host, making good its intrenchments before displaying its ensign. Indeed, we have seen instances where not one of the classic signs of inflammation (rubor, calor, tumor, dolor) could be observed in the throat; yet the subjects complained of weariness of body and limbs, and within twenty-four hours developed alike the faucial redness and the membranous exudation. In instances of relapse, we have witnessed again and again (when the throat had become clean and convalescence was seemingly at hand) a removal of febrile excitation—before the exudation reappeared in the throat. Clearly, such phenomena are demonstrative of the stealthy inroads of a specific poison into the great highway of the organism, which, with the blood, everywhere pervades the body, exerting more or less of a baleful influence upon its every tissue. The kidneys, in at least a third of the cases, exhibit in a day or two their share in the general systemic distress by the appearance of albumen in the urine. The case mentioned by Dr. Burdon-Sanderson, in which albuminuria appeared eighteen hours after the patient had been in perfect health, is confirmatory of our thesis as to the primary implication of the system by the poison of diphtheria.* Numerous authorities have recorded alterations of structure in the stomach, liver, spleen and kid-

*“Contribution to Pathology of Diphtheritic Sore Throat.”—*British and For. Med. Chir. Review*, January, 1860.

neys in fatal cases. *Post-mortem* revelations have been made of degenerative changes in the brain, spinal column, nerves and muscles. These are the ashes, so to speak, evidencing on every hand the general character of the conflagration. In homely phrase, we believe the localists, in the enthusiasm of their experimentation, have *placed the cart before the horse*.

As the question has a practical bearing upon the management of the disease, we would loudly re-echo the opinion that "diphtheria is a general disease. It has local deposits, it is true, but in the same manner that scarlatina will localize itself on the skin, mucous membrane of the Belinian canals, etc.; measles on the skin and mucous membrane of the respiratory organs; or typhoid fever on the mucous membrane of the intestinal tract."*

Diagnosis.—The occurrence of a *membranous* and *coherent* exudation is the clinical stamp of diphtheria; which, in connection with more or less constitutional depression, should enable us to separate it from the few affections with which it is likely to be confounded. The violent onset of scarlatina, its high fever, cerebral and gastro-intestinal derangements; the uniformly reddened and oedematous condition of the throat, with such a want of coherency in the depositions which may cover the throat as to render them pultaceous in character, presents, *tout ensemble*, a picture so variant from diphtheria that, even in the absence of the peculiar scarlatinal rash, discrimination could be easily made.

During the outbreak herein mentioned, three cases of follicular tonsillitis occurred in the Institution, accompanied by fever. The tonsils were swollen and red, dotted here and there with small, yellowish patches of sebaceous matter, occupying the oval depressed mouths of the crypts which pour their contents on the surface of these conglomerate glands. However, these sebaceous patches *do not display the least disposition to coalesce*. Failure to mark the peculiarities emphasized, may lead to an unwarrantable expansion of the statistics of diphtheria.

Treatment.—We have no specific or "cut and dried" medication to proffer for diphtheria. We believe this, as

*See an excellent article on the "Pathology and Therapeutics of Diphtheria," by Dr. A. Jacobi, *Amer. Jour. of Obstet.*, February, 1875. It is but just to say, however, that Dr. Jacobi now coincides in belief with the localists.

every other affection, may best be met by treating the individual subject of it rather than the disease, so-called. We have an abhorrence of the routinism that attempts to bring numerous cases, with their individual peculiarities, down to the Procrustean bed of a preconceived mode of treatment. The clinical feature, which may be recognized, to a greater or less extent, in every instance of the affection—whether occurring in the robust or enfeebled condition—is *adynamia*. Its utterance, being only less pronounced in the one instance than the other, clearly teaches the lesson that any medication tending further to lower the individual *tonus* would be malpractice. Corroborant agents should be employed, with every precautionary measure to conserve the strength of the organism. The patient should be put to bed and kept there until convalescence is fully assured. During the outbreak in the Institution, we witnessed three cases of relapse (with a return of both constitutional and local trouble), attributable to a disregard of this precaution. In the outset of the disease, when there is reason to believe that the stomach and bowels are embarrassed by food or its products, we resort, in a single dose, to an emetic and aperient, with a uniform leaning toward ipecac in the combination. Stimulant tonics are resorted to at once, notwithstanding the presence of fever—which is a *snare and delusion, brief in duration, and signaled by diminished blood pressure*.

Iron, whilst not a specific remedy, is yet *primus inter pares* in confronting the drift toward anæmia, with all its baneful direct and indirect influences. By an early resort to iron, the systemic forces are strengthened, and the enemy met and overcome in detachments before it can mass itself in overwhelming numbers. It fortifies the weakest part of the line of defense by directly acting upon the blood as an ozonizing agent, improving its quality and sustaining indirectly all the nutritive functions of the economy. The old muriated tincture of iron, in decided doses, is the most reliable and serviceable preparation—administered in conjunction with the potassium chlorate, spiritus Mindereri, or spiritus ætheris nitrosi, according to the indications.

Chlorine water, in combination with the iron, has served to abridge the fever and palliate the thirst and dryness of the throat. It acts locally by its oxidizing agency, as

a disinfectant and cleanser of the throat. Systemically, its influence is felt as a stimulant tonic. The cases before referred to in which no direct application was made to the throat, were most satisfactorily managed by this combination.

The sulphate of quinia is unquestionably a valuable agent in this disease. When given in moderate doses—two to five grains—its action is that of a general nervous stimulant, assuaging weariness and restlessness, and invigorating the vaso-motor centers, whereby arterial pressure is exalted. Upon the certainty of this action of quinine in tonic doses, experimentation and clinical observation are in unison. The instances are rare in which *alcoholic stimulants* do not become specially applicable during some period, either early or late, of this affection. Indications of nervous depression, frequency, feebleness or slowness, irregularity, compressibility of the pulse, are the signals of systemic distress demanding the sustaining influences of alcohol. Some years ago, we became deeply sensible of the inestimable value of the alcoholics in certain phases of the disease. We had just witnessed the death of a little patient from collapse; and, apprehending from the symptoms a similar result in the case of the twin brother, who was prostrated at the same time with diphtheria, we gave to this child, in his third year of age, a teaspoonful of old *ante-bellum* brandy, every two hours, for three days—the stimulants being gradually lessened in quantity as the signs of improvement became more and more marked. In subsequent encounters with diphtheria, and notably so in the Institution outbreak, the satisfactory results of its employment have deepened our conviction of its remedial worth. Although we are not persuaded of the direct antagonism of alcohol and diphtheria,* yet we are fully convinced of its great value in combating the phases of asthenia in which diphtheria is so eventful. This it does not do in an antidotal sense, but by virtue of its stimulant influence upon the arterial and nervous systems. It acts as a retarder of tissue waste—a conservator of the bodily strength through the correlative force contributed to the nutritive processes of the organism.

From observation, we are disposed to believe that po-

*Antagonism of Alcohol and Diphtheria, by E. N. Chapman, A. M., M.D., 1878.

tassium chlorate enhances the goodly effects of the tincture of iron, in conjunction with which it is usually administered. Though observation has shown that the chlorate does not yield its oxygen to the blood, as was once supposed, yet it is not at all improbable that it may, by catalysis, increase the ozonizing influence of the iron. Possessed of a high diffusion power, it pervades the tissues of the body, stimulating the recondite interchanges which occur between the blood and tissues, and promoting the drainage of the system by its diuretic action. Whatever may be explanation of its action, still the clinical assurances of its usefulness are undoubted.

Where the larynx is invaded during the progress of the disease, the remedies already referred to may be appropriately continued, with the *inhalation of warm air* laden with moisture or vaporized aqua calcis.

When the laryngeal obstruction is urgent, a direct emetic should be used.

In the forms of paralysis consequent upon the disease, strychnia or nux vomica are serviceable addenda.

When the muscles of deglutition are paralyzed, we have resorted to the nasal tube and stimulant enemata, which we have been obliged to use for weeks. Sponging the body with warm whisky and anointing daily with vaseline and cod-liver oil, have proved highly serviceable. Alimentation is a most important factor in the successful management. Concentrated and liquid aliment will be found best suited to the depreciated digestive powers. Milk, meat juices, mutton and chicken broths, well made, should be given in quantities adapted to the gastric powers, and at short intervals of time.

Local Treatment.—In the early stages, direct local treatment of the throat we regard as a most important measure. We have usually employed the following astringent and antiseptic combination: \mathcal{R} Liq. ferri persulphatis, \mathfrak{z} j; acidi carbolici, gr. x; glycerinæ puræ, \mathfrak{z} ss. M. Make lotion. S. Apply with camel's hair brush over and around the exudation once in twenty-four hours. Such an application occasions a condensation of the membranous deposit, and restrains the abnormal growth and multiplication of the epithelial cells (which are the essential pathological factors of the pseudo-membranous formation), thus hastening the limitations of the diphtheritic deposit, and promoting its evolutionary changes

and detachment. When the posterior nares are implicated, the nostrils may be advantageously syringed, night and morning, with the lotion mentioned, diluted with warm water (gtt. x to aq., $\tilde{5}j$). Spraying the throat three or four times daily with aqua calcis, or a solution of lactic acid (f $\tilde{5}j$ to aq., $\tilde{5}iv$) has seemingly facilitated to exfoliation of the membranous deposit. Experience has demonstrated the good effects of the potassic chlorate, in solution, as a mouth-wash and gargle. Its stimulant and corroborant influences upon mucous surfaces are attested by the relief afforded in the phases of stomatitis which usually complicate diphtheria. Gargles of carbolic acid, chlorine water, diluted sulphurous acid, potassium permanganate, used at short intervals, have severally proved serviceable in cleansing the throat, deodorizing the breath, and removing the septic products of the decomposing exudation, which, if taken up by the absorbents, would complicate the case by their harmful influences. It is just in this connection that local antiseptic measures are of inestimable value.

Bretonneau grasped the truth, but not the whole truth, when he declared that systemic poisoning could alone occur from the absorption of putrescent materials from the throat—thus illustrating the force of Herbert Spencer's words that a "falsity has usually a *nucleus* of reality."—*Virginia Medical Monthly*.

Academy of Medicine of New York—Section on Theory and Practice.

REGULAR MEETING, MAY 20, 1879, E. H. M. SELL, M. D., CHAIRMAN.

AT 9 P. M., the Section was called to order by Dr. E. H. M. Sell, Chairman.

It was voted that, owing to the lateness of the hour, the reading of the minutes of the last meeting be omitted.

The Chairman announced as the subject for the evening, the continuation of the subject of last meeting, viz: "Changes in Type and Treatment of Disease in the Last Thirty Years," and called upon Dr. J. C. Peters to finish

the paper, of which he had read a portion at the last meeting of the Section.

Dr. Peters said that among the many causes to which have been attributed a change in the type of disease were the great famine in Europe, which introduced the typhoid element, the great epidemics of cholera, the weather, and the treatment of disease. Dr. Peters read a carefully-prepared paper, giving many statistics, and illustrating the effect which each of these causes has had upon the type of disease. The effects were marked and undeniable, but, he believed, not permanent; and it is his belief that there has been no permanent change in the type of disease, with the possible exception of scarlet fever. Under the same conditions and treatment the type of disease remains the same. Treatment of disease had, however, during the last thirty years, changed very much, and the change was due to an advance in knowledge. The average practitioner is a better diagnostician to-day than he was thirty years ago. Blood-letting and the excessive use of mercury have been discontinued in diseases of an asthenic type. Opium treatment in inflammatory diseases has been introduced. Dr. Peters, many years ago, called the attention of the profession to the fact that drunkards seldom died of phthisis, but that, in the great number of autopsies he had made of this class, many old cicatrices were found in the lungs. Since that time alcohol has been successfully used in the treatment of phthisis. Some of the old, discarded remedies are being revived--notably, blood-letting and the use of calomel in large, so-called sedative doses. Homœopathy had the effect of developing the expectant plan of treatment.

Dr. J. Lewis Smith agrees with Dr. Peters that, on the whole, medical men are better diagnosticians than they were formerly, and that they have a more thorough knowledge of pathology, and give more careful and accurate descriptions of disease; this has led to changes in names. True, croup he does not believe to be more prevalent now than formerly, but thinks some of that which is called croup at present, is diphtheria; and thinks the two diseases to be entirely distinct. Within his experience the type of disease has not changed.

Dr. Messinger stated that in his time he had not seen much change in the type of disease.

Dr. H. P. Farnum, referring to the revival of old reme-

dies, said he had found that the sedative dose (3ss.) of calomel was not followed by catharsis, and asked what the experience of members of the Section had been in that particular. The remarks of several members, in reply to Dr. Farnum's question, indicated that the exhibition of thirty or forty grains of calomel is usually followed by free catharsis.

Dr. A. S. Church remarked that the theory of change of type in disease from the influence of epidemics he believed to be untenable, but would attribute more of the apparent change to the different modes of living and surrounding circumstances, and to the different methods of treatment adopted. In addition to the causes which had influenced treatment, already mentioned by Dr. Peters, he thought public opinion might be mentioned, and especially in regard to blood-letting, which, he thought, ought sometimes to be resorted to when it was not. He did not believe that there had been any change in the type of disease, but that under the same circumstances it would always present the same symptoms and require the same treatment.

Dr. Kennedy thought blood-letting was abandoned, because of homœopathy, and ought to be revived. He did not believe there had been a change in the type of disease. Cholera is, and always has been, the same.

The Section then adjourned until the call of the Chairman, when Prof. J. Lewis Smith, M. D., has consented to read a paper, the subject to be announced in due time.

Treatment of Fractures of the Clavicle.

L. A. DUGAS, M. D., LL. D., Professor of Surgery in the Medical College of Georgia, gives the following method in the New Orleans *Medical and Surgical Journal* :

After carefully reducing the displacement of the fragments, by bringing the elbow of the injured side against the thorax, and forcing it up so as to carry the shoulder upward, backward and outward, and also acting, if necessary, upon the fragments directly, the next step will be to secure the limb in this position. For this purpose, procure a square yard of unbleached shirting (this being softer than bleached fabrics), and cut it diagonally in two so as to obtain a triangular bit, to the acute angles of

which should be sewed strips of the same material, three inches wide and from two to four yards long, according to the size of the patient. Apply the middle of the base, or long side of the triangle, beneath the elbow as it rests against the chest, having a margin of about four inches behind, and carry the obtuse angle toward the fingers. One of the acute angles, with its strip, will now be carried between the arm and chest, up to the fractured clavicle, around the back of the neck, over the sound shoulder in front, and beneath the axilla, and finally around the chest, including the arm just above the elbow. The other end of the strip should be then carried in front of the fore-arm, up to the sound shoulder, behind and beneath the axilla, and around the chest and arm, so as to meet its fellow and be tied to it. Finally, the margin left projecting behind the elbow, should then be elevated, doubled and so secured with stitches, as to prevent the elbow from sliding out of the sling in that direction. The portion of the triangle situated along the forearm should be also folded around it, and thus secured. Lastly, the strips encircling the chest and arm should be stitched to prevent their upward or downward misplacement. If it be necessary to press down one of the fragments, this can be effectually done by interposing a small pad or compress between the bone and the bandage which passes over it. It is scarcely necessary to add that the precise order in which the roller bandage is applied may be varied to suit the views of the surgeon.

The advantages of this bandage are found in its perfect adaptation to the necessities of the case, in its great simplicity, in the facility with which it may be made secure, and in the very slight inconvenience to which it subjects the patient. Children as well as adults bear it without a murmur, and, if it becomes necessary, for the purpose of cleanliness, to remove it, any intelligent mother or nurse may reapply it if the physician is not accessible. While it can not be denied that under any plan of treatment, there may occasionally remain some unevenness or deformity at the seat of fracture, I must say that I rarely have seen anything of the kind in cases treated on this plan, notwithstanding the fact that I have, not unfrequently, after applying the bandage over in presence of the mother, left the subsequent management entirely to herself.

The Treatment of Hemorrhoids.

Dr. F. P. Atkinson says in the *Practitioner*, August, 1879:—A good deal has of late been written with respect to the operative treatment of hemorrhoids, and I think in this way attention has perhaps been diverted from the use of topical applications. Of course local treatment by itself is of little use, inasmuch as while the cause remains any benefit that may be obtained can only be partial and temporary. As far as I can see, hemorrhoids are to be divided into three classes; namely, acute, subacute, and chronic, according to the symptoms and time that they have existed, and the treatment has to be adapted to the stage in which they are presented to our notice.

In the acute stage they are inflamed, of a dark red appearance, and give rise to a throbbing, burning pain, or like that which would be produced by the application of a red-hot coal. Mr. Biddle, a fellow-practitioner, tells me that in this stage the effect of calomel-dusting is something wonderful, and that relief is more quickly gained from this than anything with which he is acquainted. He considers that it acts in a twofold manner; namely, upon the liver, and at the same time as a local sedative. Sponging, also, with hot water gives a good deal of ease.

If this treatment prove inefficient, and the pain be very excessive, leeches may be applied to the anus, or an incision made into the center of the swelling and the contents squeezed out.

In the subacute stage the feeling complained of is more that of weight and tension, though on going to stool the pain is often very acute.

To relieve the existing condition, the compound gall ointment or a solution of acetate of lead and opium should be freely and frequently applied, and an enema of cold water used after each action of the bowels.

In the chronic stage the best application is the common pitch ointment. For this useful piece of knowledge I am indebted to a Mr. Corbett, and he, it appears, got the hint from an old nurse by seeing her apply some tarred rope. Its astringent effect is something remarkable, and I know of nothing which acts so quickly and effectually.

The general treatment has to be directed toward altering the particular mode of living which has brought

about the abnormal condition. Hence all luxurious and sedentary habits, hard riding, venereal excesses, the use of aloetic purgatives, should be forbidden; whilst the object of the *medicinal treatment* should be to keep the bowels freely relieved and lessen as much as possible portal congestion. Dr. Young, of Florence, wrote a paper in the *Practitioner* of January, 1878, upon the use of glycerine internally in these cases, but I do not think it has any specific action upon the hemorrhoids themselves. The improvement which he says takes place is, I fancy, in all probability, simply due to an increased action of the bowels which it produces. Confection of senna is a particularly useful, and by no means unpleasant, aperient in these cases. I would, however, rather suggest the use of a euonymin pill occasionally at night, with a dose of effervescing Carlsbad salts in the morning, as these have a direct effect upon the portal circulation. In conclusion, I would remark that I can not speak too strongly with regard to the effects of the pitch ointment, for I feel certain that the necessity for operative measures may often be prevented by its timely use, and I would recommend every one to give it a trial where the compound gall ointment is ineffectual.

MICROSCOPY.

Tertiary Syphilitic Ulceration of the Ileum.

F., FIFTY-ONE years old (counselor), had been healthy, with the exception of syphilis, until six months before his entrance into the hospital. At about that time he felt a weakness in the lower extremities, especially the right, and fatigue in walking. The appearance of locomotor ataxia developed more and more, and this caused him to go into the hospital. At his entrance he was found to be robust, well nourished, with scars of mucous patches on the lips, psoriasis palmaris, and in the right groin scars from ulcerations of the glands.

The digestion was pretty good, stools not bad, no pains in the intestines. On the whole, the case appeared like one of locomotor ataxia.

The treatment against the syphilis was decided, and

iodide of potassium and Zittmann's decoction were prescribed; but the patient was scarcely put upon this treatment when he suddenly died. The *post-mortem* examination showed the following condition of the intestines; "All the layers of the intestines, from the lower part of the jujunum up to the ileo-cæcal valve, corresponding to Peyer's plates, were pervaded by a gray, reddish mass, which had on these parts a parchment-like feeling; the folds of mucous membrane were broader than normal, stiff, not expansible. In the middle of this infiltration an ulcer was found, of polygonal shape, and of the size of a small silver three-cent piece (krentzer), parallel to the longitudinal axis of the intestine. The base of this ulcer is formed of the thickened, smooth, fatty-looking submucous layer, the borders of which are flat but sharply marked. The peritoneum is here covered with a tender pseudo-membrane and pervaded by enlarged lymphatic vessels, filled with thick yellowish-white lymph.

"Between the vessels were to be seen numerous little knots, of different sizes, which were in communication with the lymph vessels. The lymphatic glands of the mesentery were slightly rough and swollen. In the cavity of the intestine were bile-colored pulpy fæces."

MICROSCOPIC APPEARANCES.

"We found a very abundant growth of round, tender cells, which were partly filled with fat; these after the addition of acetic acid showed several granules. The growths embrace the normal mucous membrane, extend through all the layers, especially the submucous connective tissues, and these, as well as the crypts of Lieberkuhn, well preserved, were filled with detached epithelium.

"On the ulcer found in the center of the infiltration the intestinal villi were very imperfect or missing entirely.

"On the smooth, fatty base of the ulcer *we saw numerous round cells imbedded in the tissues. The same growth of cells was also present in the muscular structure, in which the cells were imbedded between the muscle fibers which separated them.*

"On some parts of the preparation (microscopic) aggregations of cells which had separated the muscle fibers had changed to a molecular mass."

"Upon a cross-cutting of the thickened peritoneum,

besides enlargements of the thick-walled vessels and round cells, distributed especially around the vessels, we found also heaps of cells which seemed to be surrounded by a firm membrane."

"The cross-cut of such groups of cells were mostly circular, and showed a space filled with round cells of the same size, which space was marked off from its surroundings by a sharp line. *These were taken to be sections of lymphatic vessels.*"

"Upon the longitudinal cut (especially in places where the enlarged lymphatic vessels and the small knots above described could be seen with the naked eye) were seen frequently *heaps of cells surrounded by a sharp line. These heaps of cells took in the whole field of the microscope and were in connection with the lymph vessels. We saw both afferent and efferent vessels, filled with the same cells which formed the contents of the little knots visible to the naked eye.* Here we have the history of a well-marked example of the so-called tertiary period of syphilis, or the period of gummy products. These products on a *post-mortem* examination are found distinctly associated with an ulceration in the intestinal canal, characteristic of syphilitic action. Infiltration of round cells (gummy products) submucous and muscular tissues, stiffening the structures so as to produce distinct induration, separating the bundles of muscular fibers until they become reduced to the appearance of a molecular mass, practically a necrosis. *Lymph vessels so distended with cells that a knotted appearance indicates the pressure to which they have been subjected,* and reveals the fact that a localized obstruction to the return of lymph through its natural channels, has occurred—vessels filled almost to bursting with a yellowish fluid lymph, and cells (gummy material?); and why? What has caused this obstruction of lymph channels and evident loss of substance, by interference with the nutrition of the parts? The microscopic examination fell short of an inquiry into the *causes* of the obstruction. The tissues of the vessels were not subjected to any test or examination to see how the structure of the walls differed from that of normal lymphatic canals. The observer was content to show us that the damage probably resulted from interference with the lymph circulation; for it is evident that if these vessels (whose office is to return to the general circulation the

lymphatic elements exuded in excess of the necessities for growth and repair) had been patent, the accumulation could never have occurred. This case carefully and ably investigated, in its gross as well as in its microscopical features, with no possible suspicion attaching which could indicate on the part of the distinguished narrator of the case the endeavor to form or bolster up a theory, has been shown to be a case of lymphatic obstruction, so associated with a lesion of tertiary syphilis (so called) that it will be difficult to resist the conclusion that the characteristic ulceration (lesion) was caused by that obstruction.

With these palpable indications of the manner in which the so-called gummy products have been localized in the present instance, shall we fall back upon the local presence of the traditional *virus* to account for the contractions of the lymph vessels? Shall we not rather claim of the renowned scientists who have already accomplished so much in the philosophical interpretation of general pathological and physiological processes, that they shall afford us a reasonable explanation of the gummous material—a material which is known not to differ in the least degree from normal germinal material—and a reasonable explanation for the manner of its accumulation in the tissues in so-called tertiary syphilis. In the absence of other cases similar to the one just presented, and with the probabilities that absence is to be accounted for simply by neglect to look for and investigate, this case, presented by a competent and presumably honest observer, must be accepted as representing facts which may be significant as to what occurs in all collections of “gummous material”—facts which are important as possibly affording an explanation of the hitherto mysterious lesions of so-called tertiary syphilis.

It appears to me that a review of the facts and arguments going to show that the lesions of the so-called tertiary period of syphilis are not the results of the local action of a virus, but are caused through damage to lymph channels in the active period of syphilis, which finally results in this contraction, thus causing obstruction to the passage of lymph and cells, and accumulation of that material at various points; these, together with the case cited, I think, warrant me in terming the period above referred to as the *period of lymphatic obstruction*.

Meeting of the Rochester Microscopical Society.

THE regular monthly meeting of the Rochester Microscopical Society was held in the lecture-room of the Free Academy, President Lattimore in the chair. The minutes of the previous meeting were read by Secretary Line and approved.

The paper of the evening was then read by Ed. Bausch, the subject being "The Microscope and its Parts." The following is the paper in full:

We all know the derivation of the word microscope, but few of us perhaps have dwelt long upon the thought of what it actually is. From our first acquaintance with the compound microscope we have the impression that it is composed of several mechanical and optical parts, the latter of which give us highly magnified images, and sometimes forget that the latter really only form the microscope. In its modern construction it is composed of an eye-piece and objective, having correlative distance and combined by a tube, while the stand or mechanical appliances are merely accessories for the easier attainment of the work.

In general parlance, I see no reason why we should not call the entire instrument a microscope; but take from it its optical parts and we have then simply a piece of good or bad mechanical ingenuity, as the case may be.

I will devote my first attention to the stand.

The first requisites in it are stability and entire freedom from liability to vibration. The proportions and weights of its parts should be such as to bring the center of gravity as near as possible to the base, so that, with or without inclination of the body, it will remain steady. The bottom of the base or foot should not present an unbroken surface, as with this it is evident that when it comes in contact with an uneven surface it becomes unsteady. The modern and certainly only true form is to have three projections, which present the only points of contact. I would advise those having instruments with flat base to cement to it at proper distances three rubber pads. I prefer rubber as in case of a slight tremor the vibratory motion is transmitted to it, while the stand remains steady.

Whatever is the form or construction of the stage, it should be able to bear the slight pressure used during

manipulation. No stage has yet been made which, under sufficiently high magnifying power, can not be shown to give way under a strong pressure. In many stands this quality serves the purpose of a fine adjustment.

The coarse adjustment or quick motion is gained by sliding tube, screw arrangement and rack and pinion, the latter of which is the favorite form in this country.

The fine adjustment or slow motion is constructed in various ways, but, no matter how, it should be faultless in its work. Nothing exasperates more and proves a greater hindrance to good work than a poorly-made fine adjustment. The form which varies the distance between eye-piece and objective, will, I think, become obsolete, as it should. We all know that any change in the length of the tube causes a difference in the magnifying power, and it is evident that when this principle is involved in the fine adjustment it makes it unreliable for accurate measurements.

In the first construction of the microscope the eye-piece and objective consisted each of a single lens. As it gradually developed, the Huyghenian eye-piece, which had previously only been used with the telescope, was successfully applied to it, and the application of achromatism to the objective finally gave it the construction which, with modifications, characterizes it to-day.

It is a fault to suppose that the rating of objectives has any connection with working distance, angular aperture or diameter of front lens. It merely indicates the equivalent of a single lens having the same magnifying power. For instance, an objective marked one-half inch magnifies, or should do so, the same as would a single lens having this focus; but it is one of the "tricks of the trade" not always to hold to this rule. Some opticians have a habit of marking objectives less than their actual value, such as marking an objective one-quarter which really has the power of a one-fifth or perhaps a one-sixth. Other conditions being the same, it is evident that these objectives will have the advantage in comparison with one which is correctly marked. In the comparison of objectives, it should, therefore, be one of the first considerations to determine by measurement the actual magnifying power of each.

Working distance signifies the space between the cover and the metal projecting over the front lens. In the low

powers it is of minor importance. In the higher ones, however, it is a greater factor in making a successful objective. It is a fault that many objectives, especially of Continental make, have a superabundance of protective metal, and thereby rob a quantity of working distance.

We all know what a diversity of opinion exists on the question of angular aperture, and even on the actual meaning of the word. The old definition represents it as the angle formed by the extreme rays that pass through the objective. The newer, and, I think, correct one, is to take the angle formed by the rays that give a distinct image. There is quite a difference between these two definitions. For instance, suppose that the front system in an objective has a larger diameter than the formula calls for. A larger number of rays will enter it than the posterior systems can transmit to the eye-piece. These extra rays give what is called diffused light, and as they do not assist in forming an image, they are practically worthless. If we use a properly constructed eye-piece, we will get a small, sharp picture, and by revolving the mirror obliquely until it (the picture) disappears, we get the impression that this is the aperture, whereas, by using a Huyghenian eye-piece, we find that we will have to turn back the mirror in order to get a distinct image. The most obliquity of the mirror, which gives the image well defined and not blurred, is evidently the angle which transmits the useful rays.

There is an idea prevalent among many microscopists that the angular aperture of an objective has an influence on the size of the field—that is, the larger the angular aperture the larger will be the field. Now, this is not the case. The diameter of the field is limited entirely by the eye-piece, or rather the diaphragm in it, and has no connection with the aperture of the objective. Neither is it, as is often supposed, in an inverse ratio to working distance. You can construct a one-inch objective of thirty degrees angular aperture, which has three-fourth inch working distance, and another of the same aperture with only one-eighth inch working distance. With higher powers this holds better, but does not become a rule.

For many years there has been, and will be for a long time to come, a conflict between the adherents of large and small angle objective. In my opinion both parties are too absolute, and lose sight of the fact that each

kind has its advantage. I will state here in parenthesis that when I say small angle I do not mean the imperfectly constructed objectives that rely upon the small diaphragm behind the systems for an approximately good result. I do not think that the partisans of large angles can righteously condemn the others when they consider that they owe a large part of their interest in and knowledge of microscopy to the latter. They forget the fact that these objectives are to-day disseminating a knowledge among students, including the large class of amateurs, which can not be disdained. On the other hand, the other party does not acknowledge that large angles are absolutely necessary for certain classes of work.

On this point I stand at utter variance with the authors of standard works, such as Carpenter, Beale, and others. The former does not recommend large angle objectives even on diatomaceæ, but thinks they may be advantageous, and for every other class of work advises only small angles. He reasons thus: because the greatest amount of work and most discoveries have been made by the latter, these only should be used; whereas, there is no doubt, that if at the present day objectives of larger aperture had been used, the result would have been gained much sooner and easier.

I will mention a few optical facts which may help to give a better understanding of the subject, and show the difference between the two.

It is generally accepted that a small angle objective has penetration; that is, the faculty of looking into an object, while the large angle has resolving power; that is, telling with extreme distinctness the particles that are in focus. In practice, however, this is not always the case. For although an objective may have a large angle, it may be, and often is, so imperfectly constructed that the other may excel it in every quality. On the other hand, besides the faults that the other may have, a small angle objective may be made by decreasing by diaphragm that of a large one and still not acquire penetration, for it is apparent that the course of the rays will be the same whether the diaphragm is there or not. However, in well-constructed objectives this is the rule, and to make it understood we will take two objectives of the same power and best possible construction—for instance, one of 50° , another of 150° . We will suppose that the front surface

of these objectives are covered by opaque plates, each of which have but one small opening. As we have presupposed the apertures, it is evident that the angles formed by the extreme rays of the cones that enter at these points will respectively be the same as those mentioned. Rays beyond these angles will also strike the surface at these points, but as they will not be transmitted to the posterior systems we need not consider them. From these two points draw segments of circles having for radii the distances to different points of the object, from which rays emanate. It is noticeable that the zones of the small angle objective are close together, and therefore take in almost every part of the object, whereas in the other this is not the case. By moving the incident points to different parts of the surface the same formation of rays will take place, and if the opaque plate be removed they will enter the entire surface under the same circumstances.

This is not a mathematical solution of the question, but will serve to show why a small angle objective will show at the same time parts of an object which lie at different depths, or has penetration.

We all know that, after we have viewed a transparent object with central or axial light, and then use oblique light, we can see its parts with greater distinctness, or if we are not able to judge the structure of an object with central light, oblique light will often enable us to do so. This principle is involved in objectives having large angular apertures, or so-called resolving power. In these objectives rays will enter at a greater obliquity than is the case in one of small angle, or take for illustration an object having semicircular projections. The rays from the portions lying nearer the bases will give a sort of side view of these parts, which, in conjunction with the front view, will naturally give a more distinct image than can those giving a front view only. They will therefore show with central light what a small angle can only do with oblique light, and using the latter the result is far superior than the other can give under any circumstances. Besides this, they have the advantage that the light can be thrown to a comparatively greater obliquity, and as every additional degree assists in giving greater resolution—presupposing that the corrections

keep step—to the same extent will the greater obliquity show the increased contrast between light and shade.

This property in large angle objectives will also serve to explain why they will bear more amplification. A number of rays are lost by refraction and absorption as they pass through the eye-piece, and this loss increases with the power of the latter. As there are a large number of rays transmitted from the same point in a large angle, a loss of some of them in a strong eye-piece will not seriously impair a sharp image, while, on the other hand, in the other objectives, a loss of the same number will be proportionately much larger, and, leaving but a remnant to form an image, this will be indistinct, or, as it is termed, the objective will "break down."

There are many to-day who ridicule the idea of using a large angle objective on anything else but diatoms. There is no question about the fact that if an objective will show well the markings on a diatom, it will do the same on any other object. It simply remains to be shown which is best adapted for a certain purpose, and in this every microscopist must depend upon his judgment to a certain extent, and to do so he must understand the principles involved.

The entire controversy can be presented in a few words. A small angle objective gives large working distance and penetration; one with large angle has shorter working distance and resolution. (I am still assuming the best possible construction in each.) The first allows the examination of an object with little or no adjustment; the second shows the same with greater distinctness, but requires the adjustment to different layers. The former, with the same power, has greater working distance, and in higher powers is easier to manipulate.

GLEANINGS.

CROUP—THE BARKER TREATMENT.—Dr. W. C. Chapman (*Toledo Journal*) reports five cases of croup, four of which ended in permanent recovery; the fifth recovered from the croup, but died in two weeks from pneumonia. The treatment was thus introduced by Fordyce Barker, ten years ago, which consists in an emetic, preferably of "Turpech mineral" (2-5 grains); veratrum viride, till pulse is

reduced to 60, where it is to be kept (two drops every hour is the usual dose); quinine, in tonic doses.

Dr. Chapman is to be congratulated on his success; and we are especially glad that he has reported the cases, since, from his well-known ability as a skillful diagnostician, an expert microscopist, an accomplished pathologist, and a thorough scholar, his report can not fail to carry conviction. As no membrane was found in two of the cases, and as the presence of membrane even is by no means pathognomonic of true croup, it is probable that, had some less eminent practitioner made the report, most of the cases would have been regarded as of *spasmodic laryngitis* merely; since, as Prof. Smith so truthfully remarks in his work on diseases of children, "there can be no doubt that many of the cases which physicians have published in medical journals as true croup were examples of spasmodic laryngitis."

A REMEDY MAKING SPECTACLES UNNECESSARY.—Dr. W. Cheatham writes to the Louisville *Medical News* that he has found that the use of sulphate of eserine makes it unnecessary to use spectacles in case their use is called for by a flattening of the cornea from old age—a very common ailment, called presbyopia. He states that this drug possesses the property of acting especially on the ciliary muscle, and contracting it, which contraction increases the convexity of the cornea. He recommends dissolving 15 grains of sulphate of eserine in one ounce of water, and putting one drop in each eye at bedtime. It produces at first the opposite defect—a too great convexity of the cornea, which is called myopia, or near-sightedness, which however, soon passes away.

He thinks the use of this remedy perfectly safe, and also adapted in cases of glaucoma and other inflammations of the eye, in cases of weakness resulting from overwork, general debility, diphtheria, etc. He says that notwithstanding the use of spectacles in cases of presbyopia gives comfort to the eyesight, there is also, however, always some trouble connected with them, which patients are often anxious to dispense with, and thinks they should be humored in this respect. We are of this opinion, also, but advise caution in using this new remedy, because, as the effects are only temporary, a continuous use is of course intended, and experience has not yet shown what

secondary effects may result from often repeated applications.—*Manufacturer and Builder*.

RECTAL MEDICATION.—A new method, F. E. Stewart, P. H. G., M. D., in "*New Remedies*" for December, proposes the oleates for rectal medication and the rectal capsule, or cylindro-conical case of gelatin (suppository-shaped) as a vehicle. This vehicle, he says, is entirely unaffected by the heat of any climate, and yet is very soluble in the secretion of the rectum. The facility and rapidity with which the oleates are absorbed, has been abundantly verified, since they were first brought prominently into notice, by Prof. Marshall, in 1872. Some of the advantages of the capsule enumerated, are—that it is ready for use immediately; that it liberates its contents in the rectum in three minutes after introduction; that it does away with the necessity of rectal injections, which, by their amount, provoke the natural irritability of the rectum, often causing their expulsion, and also with the necessity of suppositories, the fat of which coats the bowel, and greatly retards absorption, as Dr. Ellerslie Wallace has proven. The medicine employed may be equally diffused in the oleic acid, if irritating; if it be mild and in the form of powder, soluble, or with an active principle soluble in the rectum, it may be placed dry in the rectal capsule, for immediate insertion. The author states that this method has been thoroughly tested in private and hospital practice in New York and Philadelphia.

THE BRAIN OF A PORPOISE.—Dr. E. C. Spitzka exhibited the brain of a porpoise with a view to the correction of certain errors that had been committed relating to the region in the brain which is supposed to preside over function of speech. It had been maintained for a long time, by some medical writers, that the island of Reil was larger in man than in any other animal, and, also, that it contained a greater number of convolutions, and for that reason the function of speech should be located there. But the reasoning was opposed by the facts. In the hippopotamus the development of the island of Reil was so great that, according to the theory, the animal should be outfitted with complex symbols, if not gifted with the power of speaking. The island in the hippopotamus was homologous to that in the horse, and the human and equine corresponding, it must be homologous to that in

the human brain. Now, in the porpoise, the island of Reil had four times as many convolutions, and was twice as large as that in man, and was completely covered with by the operculum and temporal lobe. In the latter respect it corresponded to the anatomy found in man and the anthropoid apes.—*Med. Record.*

DR. HARRIS FISHER, of Eastman, Georgia, says: The Alum and Iron Mass from the Bedford Virginia Springs has been thoroughly tried by me. In the obstinate, poverty-stricken condition of the blood, it has succeeded in bringing about a favorable change, in less time, and far more pleasantly to the patient, than anything ever used in a practice of twenty-three years, either vegetable or mineral. I have often, at great expense, supplied my patients with the truly elegant elixirs and fermented wines of the best pharmacists in the country, with no other results than making their head ache, and irritating the digestive organs. I have yet to find the man, woman, or child who could not take with impunity the alum and iron mass, properly diluted with water. As a mere appetizer, it is in my experience unequaled, being the only medicine I ever used that would unmistakably improve the appetite after one day's taking. I have used it with decided benefit in chronic womb affections attended with more or less anæmia. I shall begin at once to try its effects in secondary syphilis attended with a general broken-down condition of the system, and I confidently expect the best of results.

HORLICK'S FOOD.—We recently used "Horlick's Food" in several cases of infant diarrhea and mal-nutrition of children, with results that prove it to be a perfect infants' food, and made in full accordance with the laws governing assimilation in early life. There are, perhaps, few conditions that call for more careful judgment than the substitution of some article of diet in cases of deficient breast milk. Preparations are still flooding the market, claiming to be properly adapted to the infant stomach, which nevertheless contain more or less starch—a detrimental ingredient usually, and one which seldom fails to disorder the digestion, and cause wasting and diarrhea. Horlick's food is entirely free from starch, the flour having been changed into dextrine and grape sugar. This food has long borne a high name, and we take pleasure in adding our testimony

to that of so many physicians throughout the country as to its excellent digestive and assimilative properties. It is recommended in dyspepsia of adults, and in all diseases where digestion has been impaired.—*San Francisco Western Lancet*.

PRESERVATION OF DISSECTING MATERIAL IN LONDON.—The *British Medical Journal* of October 11th gives an interesting sketch of the methods of the preservation of subjects in the London dissecting-rooms. At Guy's the subjects are injected by the Howse method, with glycerine and arsenic, but are afterwards put into a carbolic acid solution. At St. Mary's, the injecting material is composed of vermilion, arsenic, plaster of Paris, and size. At Middlesex Hospital, arsenic in a solution of carbonate of potassium was used, the subjects being afterward wrapped in carbolic acid cloths. At University College, carbolic acid in glycerine is the injecting material. In other schools, chloride of zinc, bichloride of mercury, arsenite of sodium, arsenic, creasote and soda, etc., etc., are used in various combinations. Not one of these schools, however, makes use of a solution of chloral, as first used by Dr. Keen, of Philadelphia. This is an economical and perfectly satisfactory method of preservation. Under its influence, subjects not only remain sweet for weeks, even in warm weather, but the muscular tissue retains its normal flexibility and brightness of color.

HOW TO GARGLE THE THROAT.—Dr. Lowenburg recommends the following method of gargling the naso-pharyngeal cavity. The patient inclines the head horizontally backward, and performs movements which we may call "quasi-deglutition," not including the last portion of this physiological action, definite swallowing. The liquid is passed much higher behind the soft palate than the ordinary method of gargling will permit. Some persons succeeded so well in this manœuvre that they are able to eject by the nose the liquid which has been received by the mouth. Moreover, these rapid muscular contractions completely detached the abnormal secretions, which can then be easily expelled, and the greatest possible relief is thus given to the patient. Another method is to fill the mouth with the tongue; this confines the gargle to the pharynx. The head should then be bowed in a for-

ward direction until the top of the cranium is its lowest portion. In this position the gargle will not only wash the roof of the pharynx—giving a sort of sitz-bath, as it were—but if the patient have caught the trick, will flow forward through the nose.—*Boston Med. and Surg. Jour.*

TREATMENT OF ROSACEA.—Mr. Broult gives the treatment of this affection as practised by M. Hillariet for the last eight years. In the morning he causes the face to be washed with very warm water, or a vapor douche to be directed against the same, for four or five days in succession. In the evening the face is bathed with the following solution: distilled water, 250; sublimed sulphur 30; and camphorated alcohol, 8, 10, 12, or 15 grams. In some cases a little ether is added with benefit. The light deposit of sulphur and camphor is left upon the skin until morning, when it is washed off, and the following ointment is applied. To soften the skin: lard, 30; oxide of zinc, 2 or 3 grams. Improvement is noticeable on the fourth day in a diminution of the pimples and redness, but treatment is continued for two or three months, and until complete disappearance of the redness. Subsequently the skin should be washed twice a day in warm water.

PILL COATING VS. ALBUMEN AND SUGAR.—Pills sufficiently firm and dry should be rolled between the finger and thumb with sufficient white of egg to give them a thin coating. They should then be placed with finely powdered white sugar in a suitable vessel and rotated. The coating looks well and has a pleasant taste.

By practice, pills may become beautifully coated with sugar by the following process:—Pills well dried on the surface are placed on a tinned copper bowl with a flat bottom, or an enamelled iron dish, the surface of which has been moistened with syrup or syrup and gum. They are then rotated and gently heated, very finely powdered, sugar being dusted on, and the motion kept up till a perfectly dry, hard, and whitish coating is obtained, the operation being repeated if necessary. The first attempt is generally a failure, but practice is the only secret.

CHARCOT ON LARYNGEAL VERTIGO.—*Prog. Medical*, No. 17, 1879.—Under the above name Charcot embraces peculiar morbid appearances, which announce themselves in

the following manner: On the development of a peculiar tickling sensation, which excites coughing, and has its seat in the larynx, or in the upper divisions of the bronchi, the patient falls to the ground with loss of consciousness. In some cases clonic spasms of the muscles of the face or extremities also occur. The unconsciousness is only of short duration, vomiting, biting the tongue, and similar post-epileptic manifestations are not at all, or only exceptionally, observed. In connection with the above, Charcot recalls attention to a case published by Sommerbrodt, in *Centralblatt*, S. 943, 1876, of a great fibroma of the larynx, as a cause of epilepsy.—*Centralblatt*, October 18.

SUPPOSITORIES IN VAGINISMUS.—R. Ol. theobromæ, ʒi; potassii bromidi, gr. x; ext. belladonnæ, gr. vi; acid. thymici, gr. i.—M. Fiat in suppositor, no I. To be placed in the vagina every evening.

BOOK NOTICES.

A MANUAL OF PATHOLOGICAL HISTOLOGY. By V. Cornil, Assistant Professor in the Faculty of Medicine of Paris, and L. Ranvier, Professor in the College of France. Translated, with Notes and Additions, by E. O. Shakespeare, A. M., M. D., Lecturer in the University of Pennsylvania, and Ophthalmic Surgeon and Microscopist to the Philadelphia Hospital, and J. Henry C. Simes, M. D., Demonstrator and Lecturer on Histology in the University of Pennsylvania. 360 illustrations on wood. 8vo. Pp. 784. Philadelphia: Henry C. Lea. Cincinnati: R. Clarke & Co. Price, \$6.50.

The authors state that the object of the publication of the work is to present a brief, elementary, and succinct explanation of the descriptions, definitions, and classification of morbid products as seen under the microscope. They say that they did not give it the name of *Pathological Anatomy* because it is based entirely upon normal histology—a department of medical science from which we have borrowed both classification and methods.

This will be found an exceedingly interesting and valuable work by all who are engaged in the study of, or take an interest in, histology—normal or morbid. The material which was utilized for its preparation was derived from

autopsies and operations in the hospitals of Paris, which are so very rich in it. Nothing was taken for granted, but everything verified by microscopical investigation by the authors themselves in their own laboratories, assisted by their pupils. As an aid to microscopists in their investigations it will be found invaluable—in fact, the very best with which we are acquainted. Although Frey's *Histology* was especially written for those engaged in microscopical investigations, we prefer this one.

The first chapter comprises a general examination of the constitution of cells and of normal tissues. In succeeding chapters the normal histology of each organ is rapidly given, illustrated by well-executed cuts, and then the study of its pathology is entered upon.

The authors disclaim allegiance to any school—*German* or *French*. They say that they are opposed to such divisions, science being a unity indivisible as truth.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM. Delivered at La Salpêtrière. By J. M. Charcot, Physician to La Salpêtrière, etc., etc. Translated from the Second Edition by George Sigerson, M. D., M. Ch., Licentiate of the King's and Queen's College of Physicians, etc. With Illustrations. Svo. Pp. 270. Philadelphia: H. C. Lea. Cincinnati: R. Clarke & Co. Price, \$1.75.

The Lectures of Prof. Charcot on "Diseases of the Nervous System," hold a high position among the classic works of medical literature, and have been translated into several Continental languages. Of the French physicians none hold a higher position than he does, and none are more esteemed by English and American students who visit Paris for instruction. We have no doubt the present work will be hailed with much pleasure by the very many who have been taught by the distinguished author.

The Lectures are divided into three parts. Part I., containing four lectures, is devoted to "Disorders of Nutrition, consequent on lesions of the brain and spinal cord." Part II., having also four lectures, treats of "Paralysis Agitaus and Disseminated Sclerosis." Part III. treats of "Hysteria, Hysterio-Epilepsy."

Our space will not permit of our presenting anything like an extended outline of the work, or giving in detail any of the subjects discussed in some of the chapters.

We can only mention that Part I., taken alone, treating of the disorders of nutrition consequent on lesions of the brain and spinal cord, is quite entertaining, and will well pay perusal. Says M. Charcot: "Lesions of the cerebro-spinal axis frequently react upon different portions of the body, and produce there, by means of the nerves, various disorders of nutrition. These secondary affections constitute one of the most interesting pathological groups, and I shall, therefore, devote several sittings to tracing out for you the principal features of their history."

A MANUAL OF AUSCULTATION AND PERCUSSION: Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M. D., Professor in Bellevue Hospital Medical College. Second Edition. Revised. 12mo. Pp. 240. Philadelphia: Henry C. Lea. Cincinnati: R. Clarke & Co. Price, \$1.63.

The works of Professor Austin Flint are too well known in this country to need any special commendation. A close, analytical, and conscientious observer, and of sound judgment, his teachings are valuable, and are sought after. All of his works are popular in the profession, and have met with a large sale.

The little work before us has already become a standard one, and has become extensively adopted as a textbook. There is certainly none better. It contains the substance of the lessons which the author has for many years given, in connection with practical instruction in auscultation and percussion, to private classes, composed of medical students and practitioners.

AIDS TO ANATOMY. By George Brown, M. R. C. S., L. S. A. Late Demonstrator of Anatomy at Westminster Hospital Medical School, etc. Fourth Thousand. New York: G. P. Putnam's Sons. 18mo. Pp. 64. Price, 50 cents.

This little work is made so that it can be carried in the pocket of the medical student in attendance upon lectures. Of course it is not to take the place of large works like Gray, etc., but merely to furnish such matter which the student is expected to know by heart in order to pass the examinations. It is very well suited for the purpose for which it is designed.

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.
INSTITUTED 1847. VOLUME XXX.

The proceedings of the meeting of the American Medical Association held last year in the city of Atlanta, Ga., May 6th, 7th, 8th and 9th, with the addresses delivered and papers read, appear now in a large volume of over a thousand pages octavo.

The papers which were read were quite numerous, and the most of them of sterling merit. Indeed, this, the thirtieth volume, is of unusual value, and certainly worth much more than the annual due of \$5.00 of each number.

Dr. Lewis A. Sayre, of New York, was elected president for the ensuing year.

BRAIN-WORK AND OVERWORK. By DR. H. C. WOOD, Clinical Professor of Nervous Diseases in the University of Pennsylvania. 18 mo. Pp. 126. Philadelphia: Presley Blakiston. Cincinnati: R. Clarke & Co. Price, 50 cents.

This little work belongs to the series of American Health Primers. It is designed for the use of both physicians and laymen. It is the opinion both of medical men and intelligent persons outside of the profession, that the exigencies of modern life are producing an ever-increasing amount of nervous diseases. Dr. Wood discusses quite a number of the most common causes of nervous complaints, and explains how they are to be avoided. Besides that of overwork, he treats of indulgence in alcoholic beverages, tobacco, secret vices, exposure, dissipation, etc. The little book is quite readable and interesting. All will be interested in his remarks on rest in labor and rest in recreation.

ON THE INTERNAL USE OF WATER FOR THE SICK, AND ON THIRST. A Clinical Lecture at the Pennsylvania Hospital, October 25, 1879. By J. FORSYTH MEIGS, M. D., one of the attending physicians of the Hospital. 12 mo. Pp. 54. Paper cover. Philadelphia: Lindsay and Blackiston. Cincinnati: R. Clarke & Co.

The feeling with very many physicians, on reading the title of this little work, would be that they had no need of it, for that they knew all about the simple element of water. But we are quite confident that the

expression of every one, on rising from the perusal of it, will be, that he has been highly entertained and very much instructed. Simple as water may seem, and manifest as its uses are, yet this lecture will prove to very many, that there is much regarding its chemical, physiological and pathological actions, with which they were not acquainted.

EDITORIAL.

GENIUS.—There has been much discussion in regard to what constitutes genius, while many have denied that it has an existence at all. According to the understanding of some individuals as to what genius is, very many may be regarded as geniuses. Blind Tom, although an idiot, and, if he committed a crime, would not be held responsible by law, would be considered by such a genius in consequence of an extraordinary capacity to perform upon the piano. Also, the so-called lightning calculators would be so classed by them. Dr. Conolly says that a *few* are lifted far above the rest by the combination of general strength of the mental faculties, with transcendent power of one faculty in particular, and that *such a combination* constitutes genius. According to him there can not be many geniuses. An individual who has not sufficient intelligence to discriminate between right and wrong, however transcendent any one faculty may be that he possesses, can not be looked upon as a genius; nor can one who, although not an idiot, yet not above mediocrity in strength of other faculties, has capacity far above average men in some particular one. Nor is genius to be applied to those who acquire with much more facility than the generality of men do a certain proficiency in all that they undertake, but who never apply to any one thing so entirely as to do any good. Such are incapable of the continued application of the faculty of attention—the faculty being imperfect in them. They are, as the *Spectator* terms them, “so many unfinished pieces of nature wrought off in haste.”

The distinguished Burke fulfills Dr. Conolly's notion of a genius. In speaking of him he says: “He seemed to possess that power of universal acquirement which men

who delight in mental exercises often desire, but for which human life is too short, and human talents, except in these rare instances, are too limited. His character as a profound politician, notwithstanding several errors into which he seems to have been driven by the impetuosity of his physical temperament, is sufficiently established by the frequent references which men of all parties make to his authority. But we are told that he had also so wonderful a capacity for making himself acquainted with all branches of knowledge, that on whatever subject he spoke, the hearer was led to suppose that subject had been the study of his whole life. This was repeatedly observed as being the character of his public orations, which necessarily comprehended at different times subjects widely various, and, to common apprehensions, incompatible. In private conversation, also, which, though demanding less mental power, yet, as it descends more into particulars, is perhaps a more severe trial of the exact depth of a man's information, the effect he produced was even greater." Dr. Johnson said of him: "If a man were to go by chance, at the same time with Burke, under a shed, to shun a shower, he would say, 'This is an extraordinary man.' If Burke should go into a stable to see his horse dressed, the hostler would say, 'We had an extraordinary man here.'" And on another occasion he remarked: "Burke is the only man whose common conversation corresponds with the general fame which he has in the world. Take up whatever topic you please, he is ready to meet you." It is curious, also, that Burke had his great admirers in the only particular concerning which Johnson was unwilling to acknowledge he had any merit, that is, with respect to his *wit*. Such was his knowledge of circumstances and places connected with America and American history, that Benjamin West, himself an American, seems to have half suspected him of being his countryman, and firmly to have believed that he must have visited America. Knowledge so extensive, so various, and so accurate, could not have been acquired without every faculty of the mind being possessed in the highest degree of perfection. The attention must, in the first place, have been precise and powerful; memory highly faithful and retentive; imagination vivid; the power of comparison vigorous; the great result, when the mental exercise was not obstructed by passion, was a judgment

in the utmost degree correct. Whatever he had attempted he would probably have mastered, and in different circumstances would have excited no less admiration as a poet, a painter, or a lawyer, than he did as an author, an orator, and a statesman."

But, as Dr. Conolly says, the ordinary circumstances of life do not require the possession of genius; nor is it at all essential to wisdom or virtue. If many geniuses were necessary the world would have them. As it is, they are few and far apart. An era now and then occurs, making necessary an Alexander, a Julius Cæsar, a Napoleon Bonaparte, a Burke, a Bacon, a Sir Isaac Newton, and a few others, and they appear; but in the general course of events it is only necessary for progress that there be mediocrity of the faculties of men's minds in natural endowments—the superiority in this or that field of learning being the result of cultivation of it to the neglect of others.

For an individual to become a great military chieftain it is more necessary, probably, for him to be a genius than it is to become a great astronomer, mathematician, philosopher, etc. To command the movements of a vast army of many thousands of men—to use it effectively as a single, great, mighty engine, in all its wonderful and almost incomprehensible complexity, requires the utmost development of every mental faculty—attention, perception, memory, comparison, judging, imagination, etc., with calm and unimpassioned emotions. It would be impossible for a really great military chieftain, like Cæsar and Bonaparte, to have some of the faculties of mind but feebly developed, as it is the case sometimes with distinguished musicians, great artists, and even great poets. From the beginning of the world, when the people have had an opportunity to choose their rulers, they have nearly always selected their most distinguished warriors, having, as it were, an instinctive feeling that such were the most competent to rule. And when we consider that the greater the qualifications a man possesses to be a great military chieftain, the nearer he approaches to be a genius, it must be admitted that the instincts tend to lead aright.

CIRCUMSTANTIAL EVIDENCE.—In very many cases it would be impossible to convict of crime if circumstantial evidence was not regarded as competent testimony by

the courts. Its unreliability, however, has been exhibited again and again. Probably in no instance was there ever a clearer exemplification of its fallibility and the great wrong it is in danger of producing, than in the case of a murder last June in the city of New York; namely, the murder of a Mrs. Hull by a negro man named Christine Cox. We were in New York at the time the murder was committed, and recollect well the great excitement that prevailed with every one. Mrs. H. had retired to bed at her usual hour, and on the next morning was found lying dead in her bed—evidently having been killed by strangulation from choking. Her limbs were found tied to the bedstead, her eyebrows were scorched by fire, and other marks of fire were visible on the bed-clothes, and *spots of candle-grease* were observed here and there on the bed. On examining the premises the front door was found to be opened, which had the appearance of having been opened from the inside. There were no marks of burglar tools anywhere showing that any one had broken into the house. A trunk in the room, however, was found to have been forced open, and a number of articles of jewelry belonging to the murdered lady were missing. No further robbery was committed, although the house was well furnished and contained much to excite the cupidity of a burglar. The husband of Mrs. Hull—a physician by the way—was a very old man, much older than herself, and did not share with her her bed and room. She, if we remember rightly, owned the property and engaged in society much, while he was somewhat a recluse. What was remarkable, although the house was well supplied with gas, Dr. Hull himself always employed for his own use candles, and kept a supply of them in his room. No one in the house but he was ever known to use a candle.

It soon began to be whispered about that Dr. Hull was the murderer, and the police authorities looked wise, and announced to newspaper reporters that they had struck upon a trail, which they were following, and would soon have sufficient evidence “worked up” to convict, when an arrest would be made. A few days after the tragedy a man came forward, who subsequently proved to be an ex-convict, and testified that he had been approached by an individual, whom he recognized to be Dr. Hull, who had offered him a large sum to take the life of a certain woman, whom he desired to have put out of the way. A

chain of evidence of a terrible character was thus forming against Dr. Hull, which, if it had not been broken just at the time it was, would have led to his being charged with the murder of his wife, his conviction, and suffering the penalty—death, or imprisonment for life. But a fortuitous circumstance happening in a neighboring city, the black clouds that were gathering about his head were dissipated, the suspicious circumstances were explained, and the plots of the police to manufacture evidence that they might claim the offered reward and relieve themselves of the odium consequent upon their inability to unravel the mystery of the murder, brought to naught. A negro presented himself at a pawnbroker's shop in Boston and offered for pawn a set of cameo jewelry, a gold watch, etc., saying that it belonged to his sister, who lived in Boston. In a short time afterward, the pawnbroker, reading a description of the jewelry of Mrs. Hull that was missing, immediately recognized that it suited that which had been offered him by the negro. He reported the fact to a reporter of a paper, at the same time giving a description of the colored man. The reporter went immediately in search of him, and finding him at a church of colored people, had him arrested. As soon as arrested he made confession of the murder, giving full details. He said he was passing by the house of Mrs. Hull about midnight of the murder, when he noticed that the front window next the hall door had been accidentally left open. He had been for a short time a servant in the house, and it occurred to him immediately to commit a robbery, which he had not thought of before. He entered through the window, fastening it after him. Getting into Mrs. Hull's room, and arousing her somewhat from her sleep, to prevent her from making an outcry, he placed his hand over her mouth and held her nose. She struggled, but he held her down by force, still continuing to smother her. Presently she became quiet, and he lighted a candle which he had brought with him, and which was found in his trunk after his arrest, and proceeded to bind her hands and feet to prevent her escaping and giving the alarm while he would be ransacking the room. After the lapse of considerable time, noticing that she had not moved, he became alarmed by her long-continued quietness, thinking that she had fainted and might die. He instantly instituted efforts of resuscitation. Seeing a

Cologne bottle, he dashed the contents in her face, spilling some of it over the bed-clothes, which took fire from his candle, scorching them and burning her eyebrows and eyelashes. Finally becoming convinced she was dead, he hastily left the house, for fear he might be caught in the very act of murder, passing out of the front door, which in his haste he forgot to close after him.

Thus it will be perceived that Dr. Hull, by apparently the merest accident, or through the interposition of a divine Providence, as many pious individuals would believe, and which we are not disposed to deny, escaped from a net of circumstances which had so enclosed him with its meshes as to leave no doubt in the minds of nearly every one that he had taken the life of his wife, until the arrest and confession of the real murderer disentangled him.

But how is proof of the fallibility of circumstantial evidence interesting to a physician? Simply because everything pertaining to crime concerns him. He has to do with it throughout his whole professional career. He is the expert who decides as to responsibility in the commission of crime. In cases of suspected poisoning he decides the question from the symptoms, and seeks for the poison in the viscera, when murder has been affirmatively declared. In blood-stains he determines whether they are those of human blood or not, and differentiates between the blood of fowl, fish, reptile, etc., and the blood of other lower animals. There is scarcely a criminal trial nowadays of any kind in which his testimony is not needed. Such being the fact it behooves the physician to be posted in everything pertaining to crime—what constitutes it, what is the value of the different kinds of evidence that may be brought forward to prove it, etc. As a journalist, therefore, we feel it incumbent to report, now and then, facts coming under our observation in regard to crime that are illustrative and of interest.

BARNARD DAVIS' COLLECTION.—The Hunterian Museum is about to receive an important addition to its treasures. For more than fifty years Dr. Barnard Davis has been accumulating a rich collection of crania and skeletons, illustrating every variety in the human species in every part of the world. He has exhumed the barrows of the

early inhabitants of England, and carefully preserved the osseous remains found in them. He has begged and bought from travelers and collectors from every clime, from Greenland to Patagonia in the New World; from Siberia to Tasmania in the Old. From the islands of the Pacific specimens were obtained before the aboriginal people were either destroyed or modified by new ways of life introduced by the English settlers. As an anthropological collection, it is probably not equaled by any in the world in its extent, richness and variety. The whole is about to be removed to the Museum of the College of Surgeons.

DEATH OF THE SULTAN'S SISTER.—We learn from the *Lancet*, of January 31st, that the sister of the Sultan died January 3d, from dropsy of the ovaries. She was born in 1842; married in 1857, having one child, which died in its infancy. She suffered several years from her disease, but could not be induced to undergo the radical operation for cure. She would submit only to tapping, and was tapped twelve times with considerable relief. After the twelfth tapping it became manifest that if the radical operation was deferred much longer she would be sacrificed. She, however, delayed against the urgent advice of her physicians. In deference to her wishes a thirteenth tapping was performed; but the relief was very transient, and she sank and died. The deceased Sultana is described as having been of warm heart, very intelligent, and possessing more cultivation than commonly falls to the lot of the fair inmates of harems.

TRANSMISSION OF SCARLET FEVER BY MILK.—A sudden outbreak of scarlet fever at Fallowfield, England, included thirty-five persons. The Local Government Board directed Dr. Airy to investigate and report upon it. He found that the infection had been distributed to the families through the agency of a particular milk supply. The question of the mode in which the milk could have become infected was not so fully cleared up, but it was shown that one of the milkers on a dairy-farm lodged in a farm-house where scarlet fever was present at the time when the milk presumably became infected, and it is suggested that the infection was communicated to the milk, in some way undetermined, but not inconceivable, through his agency.

LESIONS OF THE BRAIN AND SPINAL CORD.—It has not unfrequently occurred to us that physicians oftentimes forget the morbid changes that may be produced in peripheral parts of the body or in the viscera, by lesions in the brain or spinal cord. These parts are in connection with every part of the body, and every part of the body consequently are in sympathy with them. Without the nervous system, not only as regards intelligence, but in every other respect, a human being would be on a level with a vegetable, and diseases would be local, arising chiefly from injury to a part. But by the nervous system all the organs are connected, and are in sympathy with one another, so that when one is affected the whole organism feels it. But the brain and spinal cord, with their nerves, not only link organs and parts of the body together, but give them their power. For instance, the heart would not act if deprived of its nerves, nor would the lungs, etc. Cut off the muscles from their nervous centers and they immediately become paralyzed. Lesions of the brain and spinal cord, therefore, affect distant parts frequently as if the latter were primarily the seat of disease, as when paralysis of the limbs of one side is consequent upon apoplexy. But there are many other affections just as directly the result of brain lesions whose cause are not so obvious and not so easily recognized. Says M. Charcot, in his work on the "Nervous System:" "The consecutive lesions in question (lesions of the cerebro-spinal axis) may affect most of the tissues and may occupy the most diverse regions of the body: thus, we may find them in the skin, the connective tissue, the articulations, the bones, and even the viscera. They generally present, at least at the beginning, the characteristics of inflammatory action. Frequently they play in the drama of disease but an accessory part, being simply added on to the usual symptoms, hyperesthesia, anesthesia, hyperkinesis, akinesis, motor-incoordination, etc. But were it only for the interest they have, when considered from the standpoint of pathological physiology, they should not be neglected."

It is not at all uncommon for severe dyspeptic symptoms to be consequent upon lesion of the nervous system, and we have known patients, under such circumstances, to be treated for months by remedies addressed exclusively to the digestive organs, as if their disorder was

owing entirely to lesions in them. Again: pneumonic symptoms, as cough, etc., arise when the lungs are in a healthy condition—the seat of the disorder being somewhere in the cerebro-spinal axis. We have no doubt that if the physiology of the brain, spinal cord and nerves were studied more, and their offices better understood, it would conduce much to a better understanding of pathology; and the treatment of disease, the great end of medicine, would be much more successful. In fact, we are of the opinion that very much of the progress of the healing art that will be made in the next decade or so will be the result of the progress in knowledge of neuro-physiology and pathology. How frequently are individuals prostrated by disease without its being able to be traced to any cause! And how ignorant are physicians as to causes which operate in the selection of parts by disease! No doubt many of these things will be made plainer when the intimate relationship of the nervous system to the organism in the discharge of its offices is not so much of a mystery.

SPECIFIC FOR DRUNKENNESS.—We learn from a copy of the *Commercial* that a Dr. D'Anger has discovered a specific for drunkenness, which is announced as a *positive curc.* Mr. Medill, editor of the *Chicago Tribune*, says it has cured 2,800 cases without a relapse in a single instance.

The Doctor does not make a secret of the remedy. It consists of a preparation of red Peruvian bark, *cinchona rubra*. A pound of the bark is coarsely powdered and macerated in a pint of alcohol, for a length of time not stated. Evaporation is then employed until a half-pint is reached. A teaspoonful of this is given every three hours for two days; after that the dose is reduced to a quarter-teaspoonful; then to fifteen, ten, and five drops. The cure is effected in from seven to fifteen days; though in extreme cases thirty days are required.

It is well known that in institutions for the cure of inebriates, quinine, the most efficient alkaloid of Peruvian bark, is used as a *tonic*; but we have never known of its being employed as a *specific* in curing. Dipsomania is undoubtedly the result of changes having taken place in the brain from the long-continued indulgence in alcoholic drinks. If the preparation mentioned cures it must

be by removing those changes. It is a remedy, however, easily tried, and it will have the advantage that if it does no good it will do no harm. It would be very proper to prescribe it as a tonic during the nervous depression following upon breaking off the habitual use of stimulants suddenly.

DECEASE OF DR. CUTLER.—We very much regret to announce that we have just learned of the decease of Dr. S. P. Cutler, of Memphis, Tenn. Our readers will recognize him as a frequent contributor to the pages of the *MEDICAL NEWS* in the department of Microscopy. The immediate cause of death, as we learn, was chronic diarrhea. He had had an attack of typhoid fever, which prostrated him very much. Our informant states that he died between the 10th and 15th of January last. Although quite feeble, he had been able to be on his feet. On the night previous to his decease he retired to bed as usual and slept well; but at an early hour of the morning he expired so gently and calmly that his wife did not know for some time that he was dead.

Dr. Cutler was a gentleman of much cultivation and extensive attainments. He will undoubtedly be mourned by very many friends. During the existence of the Memphis Microscopical Society, which, at one time, was a very active organization, he was the President.

DEATH OF DR. J. B. DAVIS.—We have recently learned of the decease of this gentleman, who resided at Peach Grove, Pendleton County, Ky. Our information was accidental, and we are not acquainted with any particulars.

NOTICE.—At the request of their friends, who have handed us their names, we have sent a number of individuals specimen copies of the *MEDICAL NEWS*, with a view of their becoming subscribers. If any such, however, do not desire to become subscribers, we will be obliged if they will return the copies with their names and post-offices marked on them. Those who desire the *NEWS* continued should remit immediately. The *MEDICAL NEWS* is the *cheapest*, and, we think, the best medical journal published.

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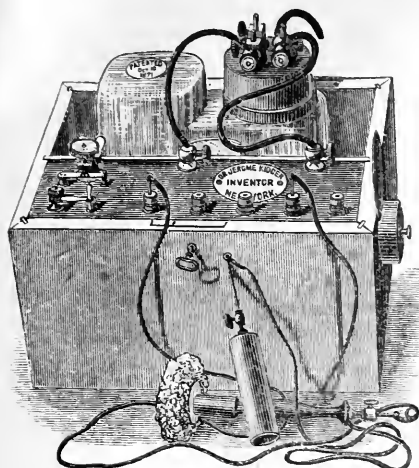
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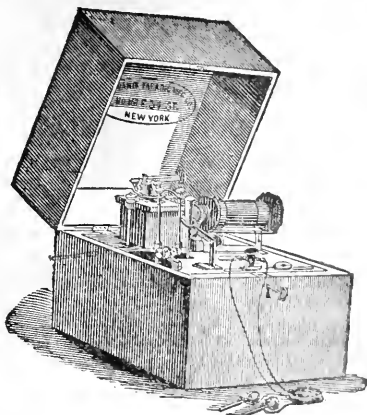
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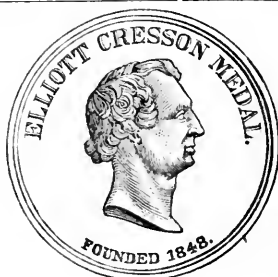
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THE PRELIMINARY AUTUMNAL TERM for 1879-'80 will begin on Wednesday, September 1, 1879, and continue until the opening of the Regular Session. During this term instruction, consisting of didactic lectures upon special subjects, and daily clinical lectures, will be given, as heretofore, by the entire Faculty, in the same number and order as during the Regular Session. Students expecting to attend the Regular Session are recommended to attend the Preliminary Term, but such attendance is not required.

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THE SPRING SESSION consists chiefly of recitations from Text-Books. This Session begins on the 1st of March and continues until the 1st of June. During this Session, daily recitations in all the departments are held by a corps of examiners appointed by the Faculty. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

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WITH
HYPOPHOSPHITES OF LIME AND SODA

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C. C. LOCKWOOD, M. D.

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GENTLEMEN—Within the last two months I have fairly tried Scott's Emulsion of Cod Liver Oil with Hypophosphites, and I candidly declare that it is the finest preparation of the kind that has ever been brought to my notice. In affections of the lungs, and other wasting diseases, we consider it our most reliable agent. In a perfectly elegant and agreeable form.

Very truly,

J. SIMONAUD, M. D., New Orleans, La.

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Chicago, *November 7, 1878.*

I have prescribed Scott's Emulsion of Cod Liver Oil, etc., to a considerable number of patients, and have been much pleased with its effects. I have very rarely met with a case in which it was indicated where it was not taken without repugnance. It is comparatively agreeable to the taste; is well tolerated by the stomach, and has so far furnished all the beneficial results expected from the combination.

Respectfully yours,

J. ADAMS ALLEN, M. D., LL. D.,

President and Professor of the Principles and Practice of Medicine in Rush Medical College, Chicago, Ill.

GENTLEMEN—I fully concur in the above recommendation: having used the remedy in several cases.

JOS. P. ROSS, A. M., M. D.,

Professor of Clinical Medicine and Diseases of the Chest, Rush Medical College, Chicago, Ill.

MESSRS. SCOTT & BOWNE:

Louisville, *December 7, 1878.*

I have been using Scott's Emulsion of Cod Liver Oil with Hypophosphites in my practice for several years, with more satisfaction growing out of success than any other preparation I have ever used. I commend it to my classes in the University of Louisville, as much the best article of Cod Liver Oil.

Respectfully yours,

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THE IMPROVED TROMMER'S EXTRACT OF MALT,

Prepared from the Best Canada Barley Malt by an Improved Process.

Attention is invited to the following Analysis of this Extract, as given by S. H. Douglass, Prof. of Chemistry, University of Michigan, Ann Arbor.

TROMMER EXTRACT OF MALT CO.:

I inclose herewith my analysis of your EXTRACT OF MALT: Malt Sugar (Glucose), 46.1; Dextrine, Hop-bitter, Extractive Matter, 23.6; Albuminous Matter (Diastase), 2.466; Ash (Phosphates), 1.712; Alkalies, .377; Water, 25.7. Total, 99.958.

In comparing the above analysis with that of the Extract of Malt of the German Pharmacopœia, as given by Hagar, that has been so generally received by the profession, I find it to substantially agree with that article.

Yours truly,

SILAS H. DOWGLAS.

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This preparation is highly recommended by physicians as an effective agent for the restoration of delicate and exhausted constitutions. It is very nutritious, being rich in both muscle and fat producing materials.

By American and foreign authorities the MALT EXTRACT is extolled in the treatment of impaired, difficult and "irritable" digestion, loss of appetite, sick headache, chronic diarrhea, cough, bronchitis, asthma, consumption, the debility of females and of the aged, in retarded convalescence from exhausting diseases, and all depressing maladies. It is often borne by the stomach when every kind of food is rejected.

In addition to the Extract of Malt with Hops, the attention of physicians is invited to the following combinations:

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Trommer's Extract of Malt,
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Each dose contains four grains of the Pyrophosphate of Iron.

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Consisting of equal parts of Extract of Malt and Cod Liver Oil, Iodide of Iron being added in the proportion of one grain to the dose.

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Consisting of equal parts of Extract of Malt and the best Cod Liver Oil.

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IMPROVED

Trommer's Extract of Malt,
WITH HYPOPHOSPHITES.

Each dose contains 2 grains Hypophosphite of Lime; $2\frac{1}{2}$ grains Hypophosphite of Soda, and 1 grain each of the Hypophosphites of Potassa and Iron.

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Trommer's Extract of Malt,
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Each dose contains six and one-fourth grains of Pepsin and two and one-eighth minims of Hydrochloric Acid.

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OUR experience of many years as Manufacturing Pharmacists has brought us in daily contact with those engaged in prescribing, and has afforded us advantages for study, experiment and practical development, which have engaged our most critical attention in perfecting new and more efficacious agents for physicians' use in the control and subjection of disease; and we assure the Medical Profession that in no instance shall we attempt to arrest their attention except we have some production worthy of their highest consideration.

Before we began the manufacture of MALTINE, we analyzed the various Extracts of Malt manufactured in this country and Europe. We found that many of them had a burnt taste and smell, and a dark appearance, and were deficient in many essential elements that they should contain, owing to the excessive heat employed. Most of these preparations had probably been evaporated, or the grain mashed, at a temperature of 212° Fahr., and consequently the Albuminoids and Diastase were almost entirely destroyed, and the other nutritive properties much impaired. This can not be otherwise when the German formula is followed, for it directs that the extract shall be heated to 212° Fahr. (*see formula for Malt Extracts, German Pharmacopœia, fol. 124*). This led us to a series of experiments to ascertain whether a preparation could not be produced that would contain the nutritive properties of the grain unimpaired. Further research developed the fact that malted Barley was deficient in most of the essential elements of nutrition, with the exception of mineral matters, or bone producers.

These experiments led us to the production of an extract from malted Barley, Wheat and Oats, which we call MALTINE, for brevity, and which contains all the elements of nutrition in the proportions required by the human organism, unimpaired by heat; our evaporation being conducted *in vacuo* at 110° Fahr.

MALTINE is rapidly taking the place of Extracts of Malt in Europe as well as in this country, and will unquestionably be used far more extensively throughout the world by the Medical Profession.

We are confident that a practical test of MALTINE will convince any practitioner that we justly make the following claims, viz:

First: That Wheat and Oats are much richer in alimentary principles than Barley, and that it is only in a combination of these cereals, in the proper proportions, that a perfect preparation can be produced.

Second: That our process for extracting the nutritive elements unimpaired is far superior to the German.

Third: That MALTINE possesses three times the nutritive and therapeutical value of any Extract of Malt in the market.

Fourth: That it is the only perfect food remedy ever offered to the Medical Profession.

From our experience during the past fifteen years, in closely watching the success of old and new remedies among the Medical Profession, we feel the utmost confidence in claiming that MALTINE and its compounds can be used with more positive results than any preparation now known, in cases of Dyspepsia attended with general Debility, Imperfect Nutrition and Deficient Lactation; Affections of the Lungs and Throat, such as Phthisis, Coughs, Colds, Hoarseness, Irritation of the Mucous Membranes, and Difficult Expectoration; Cholera Infantum and Wasting Diseases of Children and Adults; Convalescence from Fevers, General and Nervous Debility, and whenever it is necessary to increase the vital forces and build up the system.

MALTINE, and all productions of our house, are kept strictly and invariably in the hands of the Medical Profession.

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During the past year we have received nearly one thousand letters from the Medical Profession in this country and Great Britain, referring to the therapeutic value of Maltine: their character is indicated by several extracts which we present below.

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We have realized decided benefit in a large number of cases treated in the City Hospital, and at the Dispensary connected with it, from your preparations of Maltine. Many persons will welcome them as most efficacious and palatable substitutes for Cod Liver Oil, and as covering a wider range of application.

S. WESLEY CHAMBERS, M.D., Resident Physician, City Hospital.

BALTIMORE, MD., Jan. 20th, 1879.

We take pleasure in saying in behalf of your preparations of Maltine, that they have fully come up to the measure of your representations. They have given us the greatest satisfaction. We have used them extensively to the great benefit of our patients.

DAVID STREETT, M.D., Resident Physician, Maternite Hospital.

LOUISVILLE, KY., July 11th, 1879.

I am using Maltine with Pepsin and Pancreatine in my family, and am exceedingly pleased with its results. Professor Flint, of your city, whom I highly esteem, has been consulted about the case and knows the solicitude I have had about it. The above preparation in Sherry, after meals, has been productive of great benefit. I am using it in the City Marine Hospital, the Kentucky Infirmary for Women and Children, and in my private practice, and am much pleased with the results obtained.

T. P. SATTERWHITE, M.D.

JACKSON, MICH., October, 1878.

In its superiority to the Extract of Malt prepared from Barley alone, I consider Maltine to be all that is claimed for it, and prize it as a very valuable addition to the list of tonic and nutritive agents.

C. H. LEWIS, M.D.

ST CHARLES, MINN., March 23rd, 1879.

In conditions of Anæmia, in convalescence from severe and protracted disease, especially in chronic cases where there is great general debility, and in the enfeebled condition of aged persons, I have learned to rely on Maltine, nor in any instance have I been disappointed of good results, therein forming a marked contrast, so far as my experience goes, to preparations of Malt, which I had used previously, and had abandoned the use of them when my attention was called to Maltine.

C. R. J. KELLAM, M.D.

36 WEYMOUTH STREET, PORTLAND PLACE, LONDON, }
May 30th, 1879. }

I am ordering your Maltine very largely.

LEONOX BROWN, F.R.C.S., Sen. Surg., Cent. Throat and Ear Hosp., etc.

75 LEVER STREET, PICCADILLY, MANCHESTER, }
January 16th, 1879. }

I have used your Maltine pretty extensively since its introduction, and have found it exceedingly useful; particularly in cases where Cod Liver Oil has not agreed, have I found the Maltine, with Beef and Iron, most valuable.

J. SHEPHERD FLETCHER, M.D., M.R.C.S.

EDDIE CROSS HOUSE, ROSS, March 8th, 1879.

I am very pleased to bear testimony to the great value of Maltine. I prescribe it extensively and with the best results, specially in anæmic conditions of the system with much stomach irritability, which it seems to allay very speedily.

J. W. NORMAN, M.B., M.R.C.S.

CHEMICAL REPORTS ON MALTINE.

By R. OGDEN DOREMUS, M. D., LL.D.

Professor of Chemistry and Toxicology, Bellevue Hospital Medical College;
Professor of Chemistry and Physics, College of the City of New York.

NEW YORK, April 17th, 1879.

I have visited the works at Cresskill, on the Hudson, where MALTINE is prepared, and spent portions of two days in witnessing the chemical processes for making the same. I was particularly impressed with the thorough cleanliness observed, as well as with the completeness of the apparatus employed for accomplishing the desired result—from the first treatment of the grains, to the concentration of the liquid product by evaporation in vacuo. The operation is effective in extracting the whole of the nutritive constituents of the grains of malted Barley, Wheat and Oats, with but a slight residue, and is the most complete method yet devised, with which I am acquainted, for accomplishing this object.

MALTINE is superior in therapeutic and nutritive value to any Extract of Malt made from Barley alone, or to any other preparation of any one variety of grain. From a chemical and medical standpoint, I can not commend too highly to my professional brethren this unique and compact variety of vegetable diet and remedial agent, nutritive to every tissue of the body, from bone to brain.

Respectfully,

R. OGDEN DOREMUS.

By PROF. JOHN ATTFIELD, F.C.S.

Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain;
Author of a Manual of General Medical and Pharmaceutical Chemistry.

LONDON, 17 BLOOMSBURY SQUARE, W. C. }

October 28th, 1878. }

To Messrs. Reed & Carnrick:

GENTLEMEN:—I have analyzed the extract of malted Wheat, malted Oats and malted Barley, which you term MALTINE. I have also prepared, myself, some extract from these three malted cereals, and have similarly analyzed it, and may state at once that it corresponds in every respect with the Maltine made by myself. As regards the various Malt Extracts in the market, I may remark that your MALTINE belongs to the non-alcoholic class, and is far richer, not only in the directly nutritious materials, but in the farina digesting Diastase. In comparison, your MALTINE is about ten times as valuable, as a flesh former; from five to ten times as valuable, as a heat producer; and at least five times as valuable, as a starch digesting agent. It contains, unimpaired and in a highly concentrated form, the whole of the valuable materials which it is possible to extract from either malted Wheat, malted Oats or malted Barley.

Yours faithfully,

JOHN ATTFIELD.

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MALTINE with Cod Liver Oil and Pancreatine.

MALTINE with Cod Liver Oil and Phosphates.

MALTINE with Hops.

MALTINE with Hypophosphites.

MALTINE with Pepsin and Pancreatine.

MALTINE with Phosphates.

MALTINE with Phos. Iron, Quinia and Strychnia.

MALTINE Ferrated.

MALTINE WINE.

MALTINE WINE with Pepsin and Pancreatine.

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